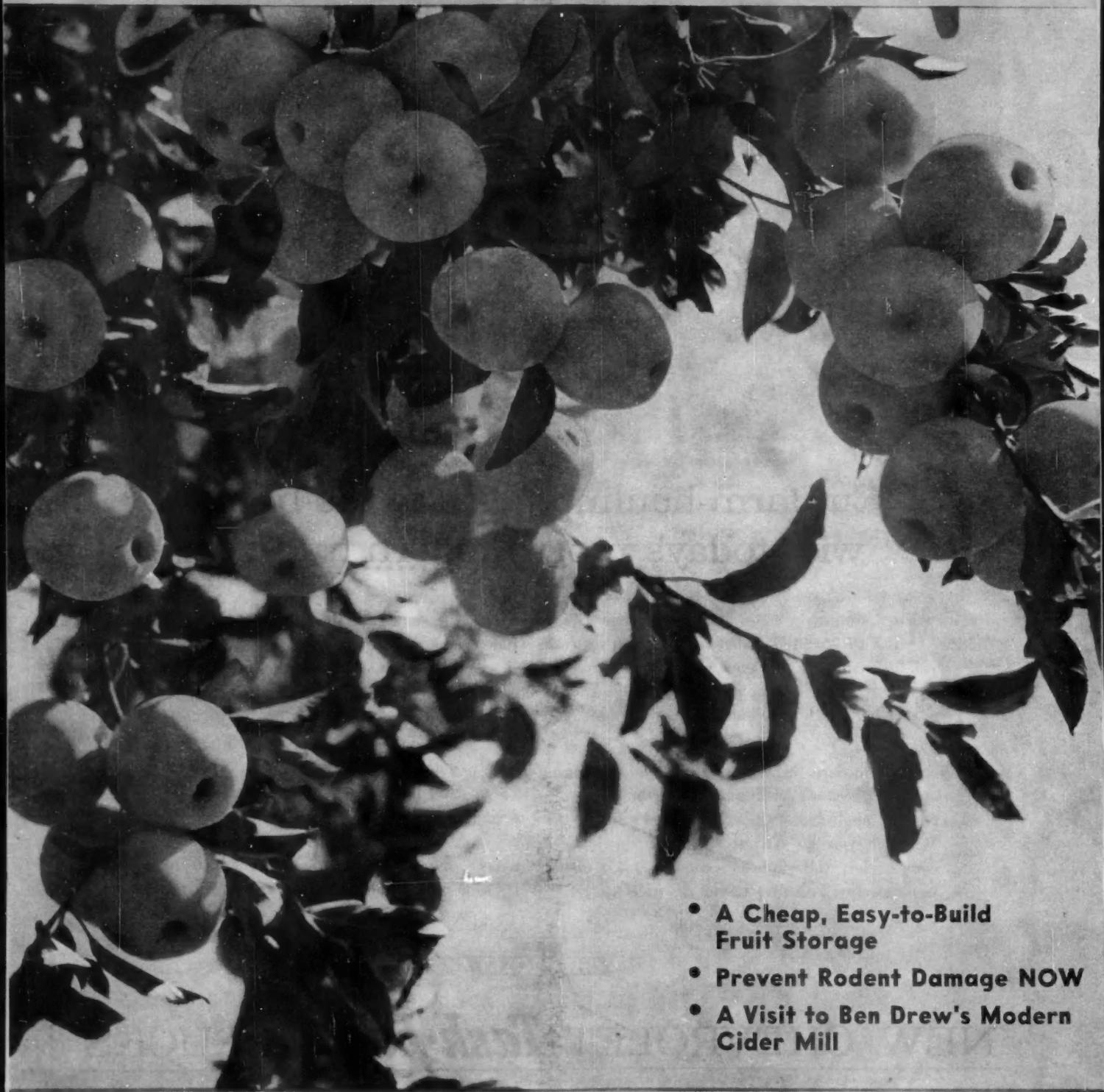


American Fruit Grower

WESTERN EDITION

NOVEMBER • 1955



- A Cheap, Easy-to-Build
Fruit Storage
- Prevent Rodent Damage NOW
- A Visit to Ben Drew's Modern
Cider Mill



Cut farm hauling costs to the bone with today's most modern trucks!

MOST MODERN in appearance, most modern in feature after top-quality feature! That's why you maintain peak efficiency with new Chevrolet Task-Force trucks—and keep hauling costs at a rock-bottom low. When efficiency's up . . . upkeep's down!

Most modern in power, with the shortest stroke V8's in any leading truck and the greatest engine choice in Chevrolet truck history! Whether you go V8 or 6—count on high-compression valve-in-head economy . . . and faster starting with a big 12-volt electrical system.

Most modern all the way through, with Powermatic design! Frames are more rigid and rugged. Cabs are more comfortable, more durably constructed. As for extras—tubeless tires are standard on $\frac{1}{2}$ -ton models; Power Brakes on 2-ton jobs. Your Chevrolet dealer will be glad to supply details about Hydra-Matic, Overdrive, Power Steering and other cost-cutting, labor-saving features. He'll show you, too, why you'll be way ahead at trade-in time tomorrow with today's most modern truck. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



NEW CHEVROLET *Task-Force* TRUCKS

Entered as second-class matter at Post Office at Willoughby, Ohio, under the Act of March 3, 1879. Additional entry at Mount Morris, Illinois

American Fruit Grower

REG. U.S. PAT. OFF.
The Only National Fruit Publication

Vol. 75 NOVEMBER, 1955 No. 11

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AMERICAN FRUIT GROWER

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NOVEMBER, 1955

"WE'RE SURPRISED... at what we can do with our CAT D2 TRACTOR"

J. F. Shoemaker & Sons
Mount Bethel, Pa.



"Our orchards are very hilly and we've found that pulling our heavy speed sprayers was very dangerous with wheeled tractors. We bought this Caterpillar D2 Tractor mainly for spraying—and afterwards we found more and more uses for it. Right now we are in a heavy land clearing project that we formerly had done with outside contracted machines and labor. We are doing it at a considerable saving. It's surprising what you can do with a D2."

John Shoemaker has this to say about his CAT* D2 Tractor . . . and it's a pretty typical comment from orchard growers who are Caterpillar owners. The D2 Orchard Tractor does an amazing amount of work in every season through snow, mud, hills and rough ground. And, of course, there are the many Caterpillar features that will make and save you more money: 60% to 80% fuel bill savings; traction and

workability to help you accomplish up to 60% more than you can with ordinary orchard tractors; long life that cuts your annual fixed costs to a minimum. Have your Caterpillar Dealer prove it to you. Ask him to show you the big line of matched companion Cat Tool Bar Equipment designed especially for use with the D2 Tractor.

CATERPILLAR TRACTOR CO.
Peoria, Illinois, U.S.A.

FREE BOOKLET . . . "Owner's Report" . . . a dollars and cents report on Caterpillar Diesel Tractor economy and production. Write Dept. AFG-115, Caterpillar Tractor Co., Peoria, Ill.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

EARN AND SAVE MORE
... IN EVERY SEASON

You've got to show your product
to make the impulse sale.

brand it!
DISPLAY IT IN.
VISQUEEN™ "C"
bags

THE INK STAYS ON! IT WON'T RUB OFF!

Impulse sales are vitally
important to fruit growers.
Attractively displayed
apples often get into shopping
baskets when they aren't
on shopping lists.



VISQUEEN™ "C" provides excellent ink adhesion for brand identification, high visibility, greater strength. Because it is uniform in gauge, it permits packaging lines to run at higher speeds with less down time. All this means real packaging economy.

A converter of VISQUEEN film will help you get better packaging. For names of those serving your territory, clip coupon, attach to your letterhead and mail.

Important! VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. Only VISQUEEN has the benefit of research and resources of The VISKING Corporation.

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of polyethylene sheeting and tubing

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Products _____

LETTERS TO THE EDITOR

Book Information

Dear Editor:

I am enjoying your magazine to which I subscribed, beginning with the February 1955 issue, and I know I will continue to receive much valuable information in it in the future. However, if you have a list of books available on the care of apple trees, I will appreciate your sending it to me—with prices and companies from which I may obtain them.

Rutherfordton, N. C. William D. Tanner

The book, "Fruit Science," by Norman F. Childers, covers fruit growing with emphasis on apples. This book is available for \$5.00 and may be obtained from the Book Department, AMERICAN FRUIT GROWER, Willoughby, Ohio. From time to time we review books on fruit growing in AMERICAN FRUIT GROWER which can also be obtained from our Book Department.—Ed.

Cider Machinery

Dear Editor:

For the past several years we have operated a cider mill in season.

The longer we make cider, the more we are impressed with the fact that some changes and improvements in the process are long overdue.

Sanitation is difficult to maintain in the rack and cloth method of cider making. Furthermore, the cost of keeping them in good shape is no small item.

The fruit producer would no doubt welcome the introduction of a compact machine that could be operated by one person, make a gallon or more of cider or juice in a few minutes, and be readily rinsed out afterward with a little water.

We have given the idea of a new method considerable thought and work, and believe it can be solved with some expense and more experimental work.

It would be interesting to know about the efforts other people have made or are making in perfecting a simple, continuous method of making cider and fruit juice without racks and cloths.

Columbia City, Ind. N. C. Johnston

Here is a good thought which many readers must have ideas about. Let's hear from you.

For information on a commercial juicer with a somewhat limited capacity and operating on the principle of liberating the juice through centrifugal force, write David A. Ballard, Sweden Freezer Manufacturing Co., 3401 17th Ave. W., Seattle 99, Wash.—Ed.

Largest Apple Tree

Dear Editor:

Sometime before 1800 my great-grandfather set out 80 apple trees, one of which grew to the enormous size of 15 feet 6 inches in circumference at 3 feet from the ground. This tree was about 30 feet tall. At one time it was enclosed in a poultry yard and I well remember that a hen had her nest in a hollow spot in the trunk.

Enfield, N.H.

F. L. Colby

Colby Fruit Farm

AMERICAN FRUIT GROWER



A. L. Kenworthy



E. L. Proebsting, Jr.

GOURLEY AWARD WINNERS

WINNERS of the J. H. Gourley medal and prize awarded by AMERICAN FRUIT GROWER for the best paper on fruit growing research delivered before the American Society for Horticultural Science were A. L. Kenworthy of Michigan State University and Edward L. Proebsting, Jr., formerly of Michigan State University and now with the Irrigation Experiment Station at Prosser, Wash.

Proebsting and Kenworthy showed how sunlight and amount of nutrients available in the soil affect the growth and the composition of leaves of fruit trees. The work throws considerable light on the use of leaf analysis in diagnosing fertilizer needs of trees, a technique of immense practical value to fruit growers.

Proebsting is the son of Dr. E. L. Proebsting of the University of California at Davis.

CONSUMER APPLE PACKAGING SURVEY

APPLE growers who pack in consumer-size containers or sell directly to the consumer at roadside markets or by mail will find valuable information in the 43-page report of a survey of apple packaging methods conducted by Dr. M. P. Rasmussen and Isabelle Thomas of Cornell University.

Sixty growers and private firms and seven co-operatives selling over 825,000 bushels of apples packaged in consumer units were questioned regarding size and type of package used, and costs.

Copies of the report, entitled, *Packaging Apples in Consumer Units at Country Points, 1953-54 Season*, may be obtained by writing Dr. M. P. Rasmussen, 248 Warren Hall, Cornell University, Ithaca, N.Y.

FRUIT GROWERS!

We are looking for factual accounts of grower experience in overcoming problems in tree and small fruit production and marketing. Send letters and, if available, photos. Regular author payment. Address contributions to Richard T. Meister, editor, AMERICAN FRUIT GROWER, Wiloughby, Ohio.

BUFFALO TURBINE

Concentrate Spraying Equipment

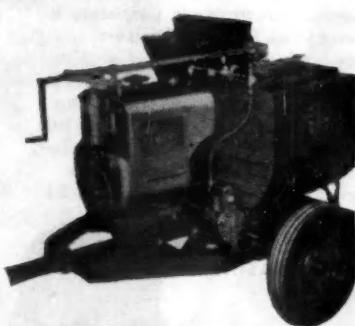
Buffalo Turbine Grower-engineered spraying equipment will put dollars in your pocket. Pioneers in concentrate and air blast spraying equipment, Buffalo Turbine's experience and improvement on principles of concentrate spraying make this equipment the finest in the field. Buffalo Turbine is an all purpose unit. It will distribute dust or liquid insecticides at the same time or separately.

"STAINLESS STREAMLINER"

The new "stainless streamliner" equipped with a 200-gallon tank will give you years of trouble free service. Low initial cost and one man operation means spraying economy. Pump capacity from 2 gals. to 30 gals. per minute. Acclaimed as the outstanding sprayer of 1955.



"SPRAYER-DUSTER"

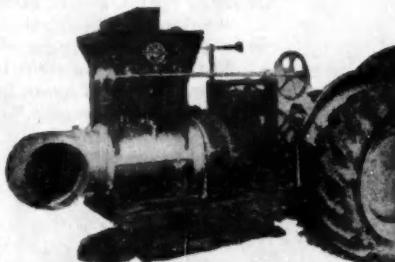


Large enough for the big grower and small enough for the small grower. The Buffalo Turbine Sprayer and Duster can be equipped with a 50 or 100 gallon tank, skid or trailer mounted. Proven by growers for orchard or row crop spraying and dusting.

"3-POINT DUSTER"

ENGINEERED TO FIT
YOUR HYDRAULIC
LIFT TRACTORS

The Buffalo Turbine 3 point duster is the most powerful duster covering the greatest area on the market today. The "Buffalo Duster" has its own power and may be easily used on your tractor, truck or jeep.



\$ SAVE Axial flow blower gives best coverage

\$ SAVE Stainless steel tank for low maintenance

\$ SAVE One man operation cuts labor costs

\$ SAVE Rapid coverage with less material cost

\$ SAVE Small tractor pulls light Buffalo Turbine

The Exclusive
"BUFFALO TURBINE"
Axial-Flow Blower
Used in All Models
Prices Start At Less Than
\$1,000

Gentlemen—Please send me full information on the Buffalo Turbine Sprayer-Duster.

I have approximately acres

in fruit consisting mostly of

Signed

Please arrange a demonstration.

BUFFALO TURBINE

AGRICULTURAL EQUIPMENT CO.
INC.

GOWANDA, NEW YORK

Portable Aluminum SPRINKLER IRRIGATION

**SAVES Money
MAKES Money**

for FRUIT GROWERS!



ALUMINUM REDUCES IRRIGATION COST IN WEST—reports Bill Adams,

Radio Station KGO, San Francisco

"To California fruit growers, irrigation is part of everyday life. Not for increasing production, or for insurance, but as a necessity. And with us, the big question has been cost. Now, with aluminum being used in sprinkler irrigation, the cost has been coming down. Cost not only in labor, which is important with everyone, but in saving water, which is so precious to us out in California."



IRRIGATION EXTENDS GROWING SEASON IN MIDWEST—reports Dix Harper,

Station WLS, Chicago

"The Michigan fruit and vegetable growers are using sprinkler irrigation for something we don't normally think about, and that is to give them a longer season. They use it in the spring on strawberries as a frost preventative and again in the fall to extend the season."



NOW! A NEW MOVIE ON THE MIRACLE OF PORTABLE ALUMINUM SPRINKLER IRRIGATION!

Bill Adams and Dix Harper have joined with three other farm reporters to make a movie called "Sprinkler Irrigation Roundup". It's full of eye-opening facts—results of irrigation on all types of crops, in all parts of the country. If your club or organization would like it shown free of charge, ask your farm leader. He can arrange it. Or write for details.



See Reynolds New Program "Frontier"—Sundays on NBC-TV.



This sign identifies dealers who sell Reynolds Aluminum Irrigation Pipe.



This label is your guarantee of genuine Reynolds Aluminum Pipe.



Member of
SPRINKLER IRRIGATION
ASSOCIATION



FREE BOOKLET!

"More Income Per Acre" tells how portable sprinkler irrigation can work for you! This is the one big opportunity for new income open to every farmer. Send today! Reynolds Metals Company, P.O. Box 1800-SP, Louisville 1, Kentucky.

REYNOLDS  **ALUMINUM**

CALENDAR OF COMING MEETINGS & EXHIBITS

Nov. 15-16—Wisconsin State Horticultural Society annual convention, Retlaw Hotel, Fond du Lac.—H. J. Rahmlow, Sec'y, Horticulture Bldg., U. of Wis., Madison 6.

Nov. 16-17—Ohio Pesticide Institute 9th annual school and conference, Fort Hayes Hotel, Columbus.—J. D. Wilson, Sec'y, Wooster.

Nov. 16-18—Western Growers Association annual convention, Westward Ho Hotel, Phoenix, Ariz.—Headquarters: 606 S. Hill St., Los Angeles 14, Calif.

Nov. 16-18—Iowa Fruit Growers Association annual meeting and short course, Iowa State College, Ames.—R. Glenn Raines, Sec'y, State House, Des Moines.

Nov. 17-18—Cumberland-Shenandoah Fruit Workers' conference, Hotel Alexander, Hagerstown, Md.—A. F. Vierheller, Sec'y, Maryland State Horticultural Society, College Park.

Nov. 28-29—Ohio Fruit School, Ohio Experiment Station, Wooster.—C. W. Ellenwood, Sec'y, Wooster.

Nov. 29-30—Illinois State Horticultural Society and Illinois Fruit Council annual meeting, Abraham Lincoln Hotel, Springfield.—Harold J. Hartley, Sec'y, Carbondale.

Dec. 1-2—Connecticut Pomological Society annual meeting, University of Connecticut, Storrs.—S. P. Hollister, Sec'y, Storrs.

Dec. 1-2—Kansas State Horticultural Society annual meeting, Kansas State College, Manhattan.—W. G. Arstine, Sec'y, Manhattan.

Dec. 1-2—Oregon State Horticultural Society 70th annual meeting, Oregon State College, Corvallis.—C. O. Rawlings, Sec'y, Corvallis.

Dec. 4-7—New Jersey State Horticultural Society annual meeting, Claridge and Marlborough-Blenheim Hotels, Atlantic City.—Ernest G. Christ, Sec'y, New Brunswick.

Dec. 5-7—Washington State Horticultural Association 51st annual meeting, Wenatchee.—John C. Snyder, Pullman.

Dec. 6-7—Oklahoma Pecan Growers Association annual meeting, Okmulgee.—Fred LeCrone, Ass't Sec'y, Stillwater.

Dec. 6-8—Michigan State Horticultural Society annual meeting, Civic Auditorium, Grand Rapids.—H. D. Hootman, Sec'y, East Lansing.

Dec. 7—Kentucky State Horticultural Society annual meeting, Paducah.—W. W. Magill, Sec'y, Lexington.

Dec. 7-8—Nut Growers Society of Oregon and Washington annual meeting, McMinnville, Ore.—C. O. Rawlings, Sec'y, Corvallis.

Dec. 8-9—Tennessee State Horticultural Society 50th annual meeting, New Southern Hotel, Jackson.—A. N. Pratt, Sec'y, Nashville.

Dec. 14-16—New York State Horticultural Society eastern meeting, Kingston.—D. M. Dalrymple, Sec'y, Lockport.

Jan. 4-6, 1956—Massachusetts Fruit Grower's Association annual meeting, Municipal Auditorium, Worcester.—A. P. French, Sec'y, Amherst.

Jan. 4-6—Western Washington Horticultural Association annual meeting, Fruitland Grange Hall, Puyallup.—Morrill Delano, Sec'y, Tacoma.

Jan. 5-6—Maryland State Horticultural Society 58th annual meeting, Hotel Alexander, Hagerstown.—A. F. Vierheller, Sec'y, College Park.

Jan. 16-17—North Carolina State Apple Growers Association annual meeting, Asheville.—Boyd C. Campbell, Sec'y, Taylorsville.

Jan. 17-19—Indiana Horticultural Society annual meeting, Sevier Hotel, Indianapolis.—Geo. A. Adrian, Acting Sec'y, R. R. 4, Box 54-M, Indianapolis.

Jan. 17-20, 1956—New York State Horticultural Society Second Century Celebration, Rochester. American Pomological Society meeting in conjunction with society meeting.—D. M. Dalrymple, Sec'y, Lockport.

Jan. 23-25—Virginia State Horticultural Society 60th annual meeting, Hotel Roanoke, Roanoke.—John F. Watson, Sec'y, Staunton.

Jan. 30-Feb. 2, 1956—State Horticultural Association of Pennsylvania annual meeting, Yorktowne Hotel, York.—John U. Ruef, Sec'y, University Park.

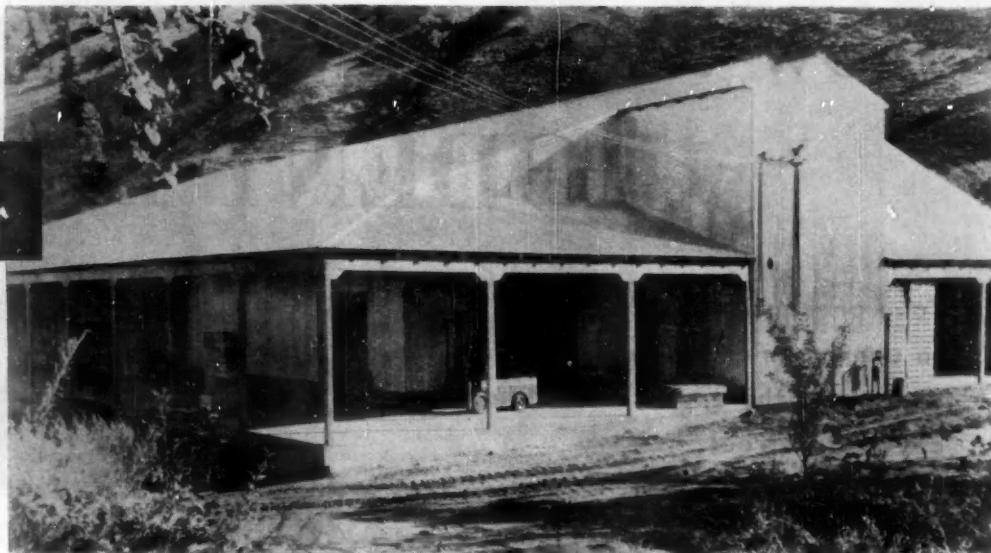
Jan. 30-Feb. 2, 1956—United Fresh Fruit and Vegetable Association annual meeting, Hotel Roosevelt, New Orleans, La.—Association headquarters: 777 14th St. N. W., Washington, D. C.

Feb. 9-10—Idaho State Horticultural Society 61st annual meeting, Hotel Boise, Boise.—Anton S. Horn, Sec'y, Boise.

Feb. 9-11—West Virginia State Horticultural Society 63rd annual convention, Martinsburg.—Carroll R. Miller, Sec'y, Martinsburg.

Feb. 15-17—Ohio State Horticultural Society annual meeting, Hotel Cleveland, Cleveland.—C. W. Ellenwood, Sec'y, Wooster.

AMERICAN FRUIT GROWER



Small Brothers fruit storage, Entiat, Wash., was built by orchard labor at total cost of 80 cents per box capacity. Storage is insulated by multiple aluminum left exposed. Apples are stored past July, with inspection reports of "Less than 1/2 of 1 per cent decay."

Build Your Own FRUIT STORAGE

New, cheap construction methods are making it possible for more growers to benefit from on-the-farm storage

By ARTHUR de DESROCHERS

A STANDARD frame cold storage building, roofed and sided with corrugated aluminum, and insulated with multiple aluminum reflective insulation, has proved very efficient, low-cost, and easy to construct with orchard help. Jobs of this type have shown a total cost for building and refrigeration varying from 80 cents to \$2 per bushel of capacity; and most owners report the jobs pay off in about four years.

Many actual scientific tests indicate that a simple concrete slab poured on well-drained ground without any further insulation is good practice providing there is edge insulation around the perimeter, or a break between the floor slab and building foundation. Porches around a storage building are desirable from a shading standpoint and as covered storage for containers, etc. Perhaps there is an existing building that can be insulated at low cost.

Before starting to build a storage building, consult a competent refrigeration man. Shop around for

The author, ARTHUR de DESROCHERS, is a cold storage consultant in Wenatchee, Wash., who specializes in the planning of on-the-farm cold storages for apple growers.



Dan and Lyman Bardin, Monitor, Wash., insulate roof of their Bardin Brothers storage. Two courses of multiple aluminum insulation were used on sun-exposed flat roof deck, and one course in shaded walls and floors. The storage was built almost entirely by orchard help.

quality and try to find a man who has a successful series of jobs of the type you want.

Equipment that uses freon as a refrigerant gas requires little maintenance and has no fire or fruit damage hazard.

A successful fruit storage depends

not only on maintaining proper temperatures in the room but on proper air circulation and maintaining of relative humidity in the 85 per cent range. If sufficient cooling coils are installed, the humidity will automatically be high. If coils are skimped to lower a price, as they frequently are, a dry atmosphere will dehydrate and wrinkle fruit.

(Continued on page 21)

How to Prevent RODENT DAMAGE

**Take precautions NOW
to control mice, rabbits, deer . . .
and spare the expense of replacing
chewed-up trees**

By ELDON S. BANTA

TREMENDOUS losses are caused each year by mice, rabbits, deer, woodchucks, and other rodents. A grower in central Virginia reports that in one year he lost almost half the trees in one 15-year-old block to hungry pine mice. Rabbits found the bark of young apple trees in a northeastern Ohio orchard a flavorful delicacy, and most of the trees had to be replaced. A cherry grower in northern Michigan had his newly planted orchard mutilated by deer.

By far the most common offenders are meadow mice and pine mice. The pine mouse is generally found in the coastal plains states, the Mid-south, and the southern sections of

derground in a dark dungeon with myriads of small tunnels about $1\frac{1}{2}$ inches in diameter. While the meadow mouse is discouraged by having the ground cover torn up around him, the pine mouse just burrows down deeper. If necessary, he goes down 3 or 4 feet.

He must come out occasionally, so

Meadow mouse trails are easily visible under dead grass cover in orchard. Place poisonous bait where trails fork. Some growers save labor by "bombing" mouse bait from airplanes.



Pennsylvania, Ohio, Indiana, and Illinois. He is smaller than the meadow mouse.

The meadow mouse makes only surface trails in the grass, weeds, or other ground cover. You can find these trails by parting the grass and lifting up patches of it. They usually feed in the dark. Pull the grass and debris away from the bases of the tree trunks to check for damage.

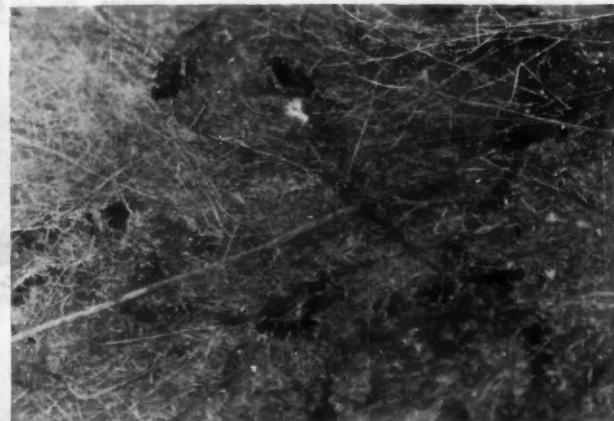
The pine mouse lives mostly un-



Pine mouse

mice have devoured almost all the bark and small roots of the trees. When this happens, the leaves yellow and fall. If you shake the trunk, it may come loose easily and fall over.

The oldest and most widely used method of mouse control is the use of poisoned baits. These do a good job of killing if you select a palatable



Spraying 12-foot strip along each side of tree rows with endrin is a new method of mouse control. Use 2 to 2½ pounds of endrin in 400 gallons of water to the acre.

he has trails on and near the surface of the soil. He also uses the surface runways of the meadow mouse. In the winter he lives deeper in his subterranean hide-out and rarely comes to the surface. A keen eye examining the soil surface can detect his breather holes. Favorite food of the pine mouse is the bark on the roots of apple trees, and other kinds as well. You may not know a colony is living underneath your orchard until the

food for bait and use a poison that is either tasteless or is also palatable. Baits must be placed systematically around trees and in mouse trails with minimum disturbance of trails.

The weather will affect your success. Baits are almost worthless if placed in trails just before rainy weather. Many find the best time to place baits is during a rising or high barometric pressure period. The fall, from mid-October into November, is a time favored by many growers. Be sure to pick up all dropped apples.

Strychnine and zinc phosphide are two recommended rodenticides. Some growers use both. They can be purchased from your spray material dealer or through your county agent or the U.S. Fish and Wildlife Service.



Using a cultivator to destroy cover discourages meadow mice. This tool, called the Rotavator, is used in Crumpler Orchards, Roanoke, Va., and is manufactured by Rotary Hoes, Ltd., East Horndon, Essex, England.



Robert Rockwell, of Twin Oaks Orchard, Mount Vernon, Ohio, uses new cultivating tool manufactured by Trump Sales, Ltd., Box 160, Oliver, British Columbia, Canada, around young trees to discourage meadow mouse activity.

The feed selected for bait is coated with the poison. Palatable dry feeds include chufa, steamed crushed oats, and wheat, and moist feeds include apple, sweetpotato, Irish potato, and carrot. Wise growers place a dry and a moist feed bait at each station.

Directions for mixing baits may be obtained from your county agent.

Bait should be placed wherever trails or other evidence of mouse

place poisoned baits in orchards and build artificial trails.



Wire mesh guards protect young trees from rabbits at F. K. Starbird's orchard, Seville, Ohio.



Young apple tree completely girdled at ground level by meadow mice. If discovered in time,arching or bridge grafting might save tree. Sod and mulch should be removed from base of tree in early fall to discourage activity.

activity are found. Grassy fence rows or woods borders around orchards should also be treated. A good spot to drop baits is where mouse trails fork. Usually four placements around a tree are sufficient. Bury unused baits so that children and pets cannot get them. Do not handle baits by hand; use tweezers or wear gloves.

The U.S. Fish and Wildlife Service has designed and tested several types of tractor-drawn machines which

The machine will not perform satisfactorily in clean cultivated orchards, in orchards with sparse grass covering, or during periods of dry weather. Tests indicate satisfactory control of meadow mice in the Northeast, Middle Atlantic states, and the Midwest, but there is some question whether the machine will perform well in the Northwest and other sections of the country. Results are erratic in orchards harboring pine mice.

A leaflet describing construction of the machine may be obtained by writing District Agent Howard A. Mering



Piling loose gravel or cinders around base of tree when it is set keeps meadow and pine mice away from young trees at Lynd Orchards, Pataskala, O.

rill, 1105 Blake Bldg., 59 Temple Place, Boston 11, Mass., or District Agent G. C. Oderkirk, Experiment Station Annex, Purdue, University, Lafayette, Ind.

The bark of young trees is a favorite winter food of rabbits. Protect trees by encasing the trunk in a piece of screen or hardware cloth to a height of about 20 inches. A repellent sprayed or painted on the trunks has also proved successful. One of the most common is a mixture of 8 pounds of resin in one gallon of denatured alcohol. A Michigan grower reports good results with lime-sulfur painted on the trunks.

A good deer repellent has been developed by Pennsylvania State University, with bone oil as the chief ingredient. Write State College Laboratories, Inc., Box 492, State College, Pa.

THE END



Meadow mouse

PLANT VIRUSES

Part III...How to Control Virus Diseases

By A. W. HELTON

University of Idaho

This is the final article in a three-part series on Plant Viruses. Part I appeared in the September issue, and discussed what viruses are and where they came from. Part II, in October, told how to recognize viruses.—Ed.

VIRUS disease control is a complex and difficult problem whatever the host category.

In fruit virus control there has been some success in isolated cases, and we believe ourselves to be on the threshold of an era of practical virus disease control in the field.

Because of the known field spread of virus diseases, one of the earliest and still most widely practiced control methods is roguing, the destruction of infected plants. As cumbersome as this method seems, it has been successful where there has been unified and diligent effort. For example, peach yellows is no longer the threat to the peach industry that it once was, because there was a tremendous and concerted effort to destroy all infected trees.

Use of planting stock certified to be virus-free or use of virus-resistant varieties has proved quite successful with some other crops, but we have not been so fortunate with our fruits.

Virus diseases are no different from other diseases of man, animal, or plant, in that there is one major prerequisite of control. First the disease and the parasite causing it must be understood within certain limits. For example, the nature of the disease and its distribution must be ascertained. Rate and manner of spread must be investigated. For crop plants, effect on yield is important from the justification standpoint, and there are several other factors that must be considered.

In many cases, nursery propagation methods offer a prime target for application of the most effective control measures from the standpoint of arresting large-scale spread. If it is a virulent and destructive disease, however, it must be attacked in the field. For such an effort, investigation of possible symptomless carriers becomes of great importance.



Virus-free strawberry plants for the Idaho certification program are grown in strictly supervised foundation plot. Individual plant inspection and wide spacing control spread of virus. Note sign indicating vector control program is under way.



Author Helton demonstrates the effect of viruses in strawberry plants of same age. Plant at right has been grafted to a virus-diseased plant and has contracted the virus. Compare stunted, almost dead condition with the virus-free plant.

Sometimes, use of resistant or tolerant varieties offers a quick, practical answer. Sometimes these qualities for orchard trees can be found in certain rootstock combinations. Theoretically at least, "vaccination" with mild strains which protect against severe strains of a given virus disease is an important approach.

Chemotherapy recently has assumed a prominence in plant disease control which promises to rival in significance the therapeutic measures of long-standing importance in the medical professions. Physical therapy also is becoming increasingly important in virus disease control. In the case of heat application alone it has



Different varieties react differently to same virus. Gerald Coolidge, graduate assistant, examines sweet cherry tree. Two lower branches grew from sweet cherry buds grafted into trunk of young Kwanzan flowering cherry tree. These buds carried "latent" virus which moved up into tree, causing severe curling and distortion of leaves on upper branches. Kwanzan is thus used by Idaho plant pathologists to detect viruses.

State



NEWS

• Labor Troubles Continue to Harass California Growers • Peach Trees in New Jersey Damaged by Heavy Rains

Labor Trouble Continues

CALIFORNIA—Two new Sebastopol apple plants have been struck by the AFL Teamsters' Union, bringing the total of struck plants in the area to ten. The action came after the plants refused to negotiate after a majority of workers had been signed by the union. Teamster organizer William Grami said. The new plants struck are the Green Valley Dryers, Graton, a member of the Analy Marketing Association, and Growers Pack, a Sebastopol apple processing plant. Green Valley Dryers is a cooperative dryer owned by growers.

Meanwhile, the Safeway stores in the San Francisco-Oakland area are being picketed by women cannery workers who carry signs urging customers not to buy products processed for the chain by the struck canneries.

Hearings are continuing meanwhile on National Labor Relations Board charges that unfair labor practices have been used by the Sebastopol Apple Growers Union plant.—Neale Leslie.

Good Quality Crop

IDAHO—The season is not only late on all fruits, but many are ripening close together. Packing sheds are packing prunes, peaches, and Jonathan apples at the same time (Sept. 26). All fruit is of good quality. Peaches were shipped greater distances than ever before.

Last year was the first year the $\frac{3}{4}$ -bushel basket was used for peaches in Idaho. As the result of good acceptance, quite a few cars were shipped in $\frac{3}{4}$ -bushel baskets this year.

Miles Clark Hinshaw, 82, resident of Idaho since 1908 and prominent apple grower, died September 14 at his home in Greenleaf. He was a member of the Idaho State Horticultural Society.—Anton S. Horn, Sec'y, Boise.

APPLE CAPITAL?

Following a tour of the Northwest, Winchester (Va.) newspaperman, Harry F. Byrd, Jr., admitted in the September issue of *Virginia Fruit* that Wenatchee, Wash., is really "The Apple Capital of the World," as it claims. Winchester, he added hastily, is the Apple Capital of the East.

Nurseryman Dies

NORTH DAKOTA—Dr. George F. Will, president of Oscar H. Will and Co., big seed and nursery company at Bismarck, died October 2 at the age of 70. He pioneered the use of hardy fruit varieties, rootstocks, and native trees and shrubs. A keen student of the history and archeology of the Northern Great Plains Indian tribes, Dr. Will's friendship with the chiefs of these agricultural Indians led to the acquisition by the seed company of early, hardy varieties of field and sweet corn, pumpkins, squash, watermelons, and field beans.—J. H. Schultz, head, Dept. of Horticulture, Fargo.

Apples Small, Many Drops

IOWA—Total apple production will be

PRICE FIXING CHARGES DISMISSED

Charges of price fixing against Appalachian Apple Service and five apple processing firms were dismissed by a Federal Trade Commission examiner after extensive hearings.

The FTC had charged that the defendants had agreed on prices in a series of three meetings in 1950. But Examiner Abner E. Lipscomb found that despite the announcement of identical prices after the third meeting, there was no price fixing. Keen competition exists among the processors, he said, so a difference of 5 cents per cwt. could determine which processor would get a grower's apples. This fact forced each processor to meet the price of others, resulting in uniform prices "independent of any agreement."

Processors involved in the charges were: C. H. Musselman Co., National Fruit Produce Co., Knouse Foods Co-operative, Inc., Bowman Apple Products Co., Inc., and Shenandoah Valley Apple Cider & Vinegar Corp.

high, but a very heavy set and dry summer have combined to make the apples somewhat smaller in size. Apple drop on most varieties has been heavy, with anti-drop sprays less effective than usual. Most growers report fairly clean apples and good coloring.—Glenn Raines, Sec'y, Des Moines.

Ben Drew to Speak

WISCONSIN—Featured speaker at the annual convention of Wisconsin Horticultural Society November 15-16 in Fond du Lac will be a Massachusetts grower, Ben Drew. (See article on page 12 of this issue about "Ben Drew's Cider Mill."—Ed.) He will speak on experiences in apple promotion and marketing, and on his methods of growing McIntosh at Drew Fruit Farms.

The Wisconsin apple crop is large and beautiful. However, windstorms took their toll and a good percentage of McIntosh went on the ground.

Winner of the apple dessert demonstration contest is Miss Edith DeSmith, of Sheboygan Falls. The final contest between the two regional winners was televised and given much good publicity.—H. J. Rahmlow, Sec'y, Madison.

Annual Meeting Plans

MICHIGAN—The annual Michigan State Horticultural Society meetings will (Continued on page 18)

FRUIT PEST HANDBOOK

(FORTY-EIGHTH OF A SERIES)

STRAWBERRY WEEVIL

THE occurrence of the strawberry weevil in strawberry fields is usually made evident by the presence of large numbers of blossom buds on the ground or hanging by a thread from the severed point of the stem. This characteristic injury is accomplished by the female weevil in the process of depositing her eggs. She first deposits an egg in a blossom bud and then cuts or punctures the stem below it so that in a few days the infested bud drops to the ground.

Within the severed bud the small larva hatched from this egg feeds and develops to the full-grown larval stage. It then transforms to the pupal stage and ultimately to the parent weevil. The weevil emerges from the bud, feeds for a short time on the pollen of various flowers, and then goes into hibernation in midsummer. Most of the hibernation occurs underneath or in accumulations of dead leaves and similar plant debris in woodlots or hedgerows adjoining strawberry fields.

Destruction of the buds is not likely to be noticed until some time after the insect has been at work. For this reason injury from the weevil, even over wide areas, is often attributed to frost, hail, or some other cause. Strawberry weevil depredations may be severe, however, even during seasons when only a small or moderate percentage of the blossom buds are destroyed because the earliest forming buds are usually affected and these normally produce the early fruit which commands the highest market price.

The strawberry weevil is a native insect which occurs as a pest throughout most of the strawberry-growing regions in eastern United States. The adults are chestnut brown with two black spots on the back. They are about $\frac{1}{10}$ inch long, with a doubled-under snout about half as long as the body. The grubs are white and about $\frac{1}{8}$ inch long when fully grown.

Control. The strawberry weevil may be controlled by applying methoxychlor as a dust or spray, at the rate of approximately



Strawberry Weevil. Courtesy USDA.

2 pounds of actual methoxychlor per acre. The first application should be made when bud-cutting is first noticed and repeated in 10 days. For example, on each acre use the insecticide at the rate of 40 pounds of 5 per cent methoxychlor dust or 4 pounds of methoxychlor 50 per cent wettable powder in 125 gallons of water.

In localities where the strawberry weevil is an important pest, it is not advisable to plant strawberries next to woodlots, nor to permit heavy weed growths in hedgerows or fence rows near by. Such situations provide excellent hibernating quarters for the weevils and make it more difficult to protect the crop.—D. J. Caffrey, USDA.

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YIELD...**

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Based Fungicides and
Nutritional Sprays.

TRI-BASIC COPPER SULFATE

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Tennessee "26" COPPER FUNGICIDE

For control of cherry leaf spot on sour cherries. Also effective for controlling scab, blotch and fruit spot.

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For zinc deficiencies. Use as spray or dust . . . Contains 53% metallic zinc.

COP-O-ZINK (Nutritional Copper-Zinc)

Contains 48% copper and 4% zinc for copper and zinc deficiencies and stimulating plant growth.

NU-MANESE (Manganese Oxide)

For soil application, for use in mixed fertilizer or for direct spray or dust application.

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For correction of chlorosis resulting from iron deficiencies by spray or dust application to the plant.

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617-629 Grant Building, Atlanta, Ga.



Ben Drew's cider "bar" has two 300-gallon transparent plastic tanks. Ben is drawing cooled cider from one of them.

Ben Drew's CIDER MILL

Ben's business is growing apples but customer demands have now put him in the cider business too

By CHARLES L. STRATTON

A COUPLE of years ago Ben Drew, Westford, Mass., apple grower, didn't even own a cider press. But customers at his fruit farm asked so often for good *clean* cider that he designed and installed a cider mill that is entirely hygienic.

From the moment the apples leave the grading table, they are never touched by hand again. Even the final product—at a cool 35°—is drawn off through a spigot in the cider "bar" from a tank in the cider mill. A window in the brick wall separating the two rooms permits visitors to watch the cider being made.

L-Shaped Design

The large, L-shaped cider mill is designed for smooth, efficient operation. The cider bar which adjoins the fruit salesroom contains twin transparent plastic cider tanks built into the wall. Also in the wall is a gas space heater (Coleman Co., Inc., Wichita, Kans.) that heats both the cider mill and bar.

Directly behind this wall in the cider production room is a double tub with a pump in the base. Anti-bacterial preparations are mixed here and pumped through the tanks when cleaning.

The cement floors are painted with a rubber cement paint. Exclusive of the cement block building, the cost of the mill, fully equipped, was around \$6,000.

Ben blends his apples to make a

high-grade cider. His blend consists of McIntosh, Baldwin, Spy, Golden Delicious, and a few crabapples for sharpness.

Apples come in through a rear door and, after the final inspection, are washed in a Trescott apple washer (Fairport, N.Y., about \$600), operated by a 1/2 h.p. electric motor.

The apple grinder, removed from his 22-inch Palmer cider press, was mounted on a stainless steel tank Ben designed and had made-to-order at a cost of about \$300. The apples are gravity-fed from the end of the washer into the grinder. A plastic splash shield, clamped in front of the grinder, collects any splattering. (Although the Palmer Cider Co. is now out of business most of their equipment can be obtained from the Orchard Supply and Equipment Co., Bristol, Conn.)

Plastic Hose for Filling Trays

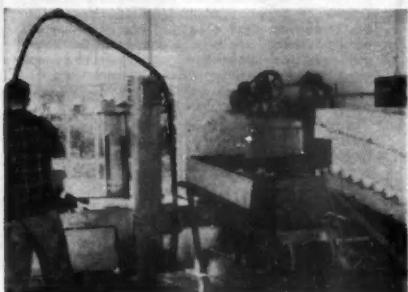
One of Ben's unusual ideas is the pumping of the ground apples (cheese) through a plastic hose into the trays on the press. A Waukesha sanitary pump (Waukesha, Wis., approximately \$275) is mounted on a stand at the base of the tank and pumps the cheese through the transparent plastic hose suspended from the ceiling. The press operator works a Linemaster foot treadle switch (Line Material Co., 800 N. 8th, Milwaukee, Wis.) connected to the pump motor to force the ground apples through the hose into the press trays.

During his first year of cider making Ben used a standard 22-inch Palmer cider press. He redesigned it for the second year's operation, setting the hydraulic pump off to one side to keep oil and other foreign matter from dropping into the cider.

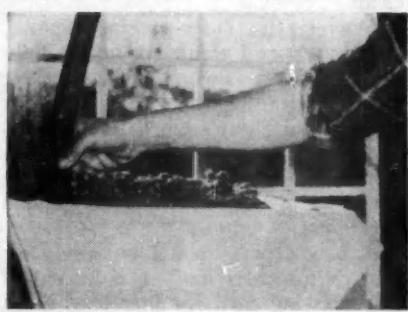
The pomace is placed on a conveyor belt running alongside the apple washer, dumped into a wheelbarrow for carting outside and picked up daily by a local dairy farmer for cattle feed. A non-corrosive pump, costing about \$300 and secured from Cherry-Burrell Company (427 W. Randolph, Chicago, Ill.), pumps the freshly pressed cider from the press through plastic hose directly into the cider tanks in the wall. Each tank has a stainless steel refrigeration coil for cooling down the cider. The Copeland self-contained unit (Sidney, Ohio, approximately \$1,400) is directly underneath and concealed from the customer's view.

The twin tanks, each of 300 gallons

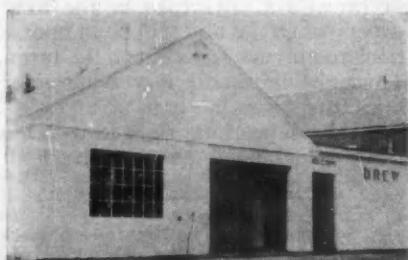
(Continued on page 14)



Apple washer at right in Ben Drew's hygienic cider mill dumps apples into box feeding into grinder. Ground apples in tank at base of grinder travel through plastic hose to trays in press.



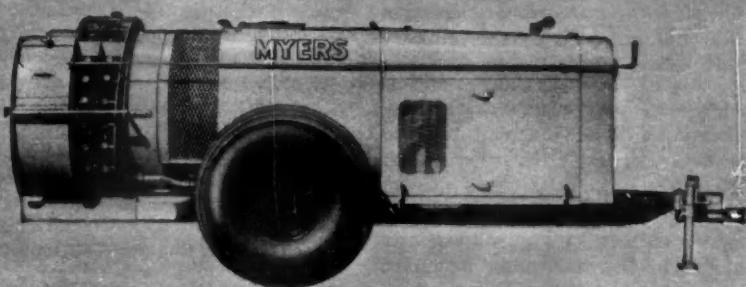
Operator controls distribution of ground apples onto trays by means of foot switch.



Ben Drew's cider mill adjoins his fruit salesroom. Window permits view of cider making. Entrance to "bar" is through swing-up garage door.

NOVEMBER, 1955

9 NEW MODELS



of Myers Concentrate and Semi-Concentrate Sprayers

For 1956, Myers offers orchardists a wider range of models . . . more combinations of air-volume, tank capacities, pump sizes and nozzle arrangements than ever before. Now a grower can select a new Myers sprayer tailor-made to his own operation. Result: better coverage for better fruit at lower cost.

These improvements for 1956 insure Myers' leading position in the design and construction of spraying equipment:

MORE AIR—Two 26" centrifugal fans with dual air inlets and special volute cases deliver air volume of 45,000 C.F.M. insuring thorough penetration of fog-like spray.

LARGER TANKS—New models include tank sizes up to 500 gallons to help save spraying hours by eliminating more time-consuming stops for water.

NEW TANK COATING—This special new coating protects steel tanks from the corrosive action of spray chemicals, adds years to the life of sprayer tanks.

NEW HANDIER CONTROLS—For greater ease and convenience of operation, all models are fitted with push-rods for adjusting the air stream and a valve assembly for centralizing spray discharge . . . both reached easily from the tractor seat.

LOWER PRICE—Standardization of tank sizes, engines, fans, volute cases and other component parts enables Myers to offer this outstanding new sprayer at a lower price.

For growers who prefer dilute and semi-concentrate sprays, Myers offers three models equipped with a 120 GPM pump that forces solution through large feeder lines to 40 nozzles to produce a fine spray mist.

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Why Railroads Support an Up-to-Date Transportation Policy

Consider the extraordinary situation that the railroads of this country face today.

Here is a fundamental industry, performing a service essential in peace and irreplaceable in war; which directly employs over one million people; which provides, maintains and improves, at its own expense, the roadways and other extensive facilities which it uses — and which pays taxes on those roadways and facilities. Here is an industry operating with constantly increasing efficiency; which is conservatively financed, with a steadily decreasing total of fixed charges.

Yet here is an industry which earns a return on investment of only about 3½% — among the very lowest of all industries; an industry so restricted by the application of laws governing transportation that frequently it is not permitted to price its services on a competitive basis.

☆ ☆ ☆

How can such a situation have arisen in a nation devoted to the classic concepts of free enterprise and equal opportunity?

An important part of the answer is clearly indicated by the recent report of the Presidential Committee on Transport Policy and Organization created last year by President Eisenhower. This Committee consisted of five members of the President's Cabinet and two other high government officials. It was charged with responsibility for making "a comprehensive review of over-all federal transportation policies and problems."

The report of the Committee, released by the White House in April, opens with this sentence:

"Within the short span of one generation, this country has witnessed a transportation revolution."

"During this same period," the report continues, "government has failed to keep pace with this change

... regulation has continued to be based on the historic assumption that transportation is monopolistic despite the ... growth of pervasive competition. The dislocations which have emerged from this intensified competition, on the one hand, and the restraining effects of public regulation on the other, have borne heavily on the common-carrier segment of the transportation industry.

"In many respects, government policy at present prevents, or severely limits, the realization of the most economical use of our transportation plant."

To the end that all forms of transportation should be developed to their greatest economic usefulness, the Cabinet Committee recommended, among other things, that:

"Common carriers ... be permitted greater freedom, short of discriminatory practices, to utilize their economic capabilities in the competitive pricing of their service . . ."

☆ ☆ ☆

Legislation to give effect to Committee recommendations has been introduced in Congress.

Passage of this legislation would not give railroads any rights that other forms of transportation do not already have or would not receive. The legislation recognizes that each of the competing forms of transportation has advantages in handling different kinds of shipments, moving between different points and over different distances. It proposes that each type of carrier be given the freest opportunity to do the job it can do best, at the lowest reasonable cost.

That's the way toward the best and most economical service, to the benefit of businessmen and taxpayers — and of the consuming public which, in the end, pays all transportation costs.

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For full information on this vital subject write for the booklet, "WHY NOT LET COMPETITION WORK?"

Association of American Railroads
TRANSPORTATION BUILDING, WASHINGTON 6, D. C.

CIDER MILL

(Continued from page 13)

capacity, were built by a local plastic prefabricating firm (Garvey Plastics Co., Lowell, Mass.) for around \$700. The tanks are of a thick transparent plastic with a double thickness in the front, allowing an air space to prevent the sides from sweating. The tanks are backed up against aluminum sheeting to give a shiny appearance.

Both cider tanks have a faucet in the base for filling cups or jugs with the cold cider. Ben generally draws from one tank while the other one is being filled. Although he prefers to use new jugs, Ben does accept clean jugs from customers and runs them through a detergent. Jugs are washed in the back room and are pushed through a slot in the wall to the cider bar.

WANTED—

SPRAY COMPATIBILITY INFORMATION
The 1956 edition of AMERICAN FRUIT GROWER'S spray compatibility chart will be available next month. Before it comes out, however, we would like to hear from growers and spraymen regarding changes or alterations they would recommend in the compatibility listings as they appeared in this year's chart.

Send the results of your spray compatibility experience, including any unusual discoveries in the performance of your sprays, to:

R. T. Meister,
Editor,
AMERICAN FRUIT GROWER
Willoughby, Ohio

A stainless steel sink in back of the cider bar has running hot water and is just the thing for keeping things clean.

During the cider-making season, two men spend about six hours daily making cider. Two hours a day are spent in cleaning the entire plant for the following day's work. The maximum cider-making capacity for two men is about 65 gallons per hour. Three men put out about 85 gallons per hour.

A larger press could be used, but Ben claims cider making is an excellent drawing card for increased cider and fruit sales, so he prefers making smaller batches over a longer period of time. He advertises in the local papers when the mill will be in operation, and invites folks out to the farm. Through his rapidly increasing cider sales, Ben Drew has built up an excellent sideline working right in with his farm fruit sales.

THE END

A \$400,000 controlled atmosphere storage, the first of its kind in Quebec Province for the storage of apples, has been built by the Freleighsburg Apple Growers Co-operative. Louis-Philippe Roy is president of the co-op.—George E. Toles.

AMERICAN FRUIT GROWER

THE QUESTION BOX

Don't be perplexed! Send us your questions—no matter how big or small. A three-cent stamp will bring you an early reply. Address: The Question Box, AMERICAN FRUIT GROWER, Willoughby, Ohio.

SPRAYER PAINT

Can you recommend a strong, tough paint resistant to chemicals which I can use for painting my sprayer?—Michigan.

Recent tests by the Dow Chemical Company show that two paints were outstanding in their resistance to agricultural chemicals. One is called No. 560 Latex Penkote, made by the Peninsula Chemical Company, Van Dyke, Mich. The other is Petrolox, made by the A. S. Harrison & Co., Staten Island, N. Y.

KILLS BLOSSOMS

I am at a loss to know why the blossoms and young leaves were killed on our apples in the second spray as I don't believe we had a frost to kill them. In April I sprayed with one pound of fermete, two pounds of arsenate of lead, and two quarts of lime sulfur. Would this combination kill the blooms and young leaves?—North Carolina.

It is a question of whether the mixture you used really did the damage. However, it would have been better if you had used a safer with your lead arsenate and lime sulfur combination. Your trees may have experienced arsenical injury. When the lead arsenate-lime sulfur combination is used lime must be used as a corrective to neutralize the solubilizing action of the lime sulfur. Of course, ferbam is not recommended with lime because the calcium compounds may change the residual fungicidal nature of the dithiocarbamate to the eradicant type without a residual action and under some conditions may give injury.

GRAFTING APPLE TREES

In grafting apple trees should the scion from the parent tree be taken from the main wood of the tree or would scions from suckers or water sprouts give just as good results?—West Virginia.

Twigs that have made growth of from one to two feet in the preceding season usually furnish the best scion wood. The buds should be plump and mature. The mid-portion of the one-year growth furnishes the best scions.

CROSS-POLLINATION

I have a Governor Wood cherry tree that is six years old but refuses to bear fruit. This year it bloomed profusely but still there were no cherries. Can you help me with this problem?—Ohio.

You should plant another variety to pollinate your Governor Wood. It must be a sweet cherry variety and it should not be an Elton or a Stark's Gold. In addition, it should be a variety which blooms at the same time as the Governor Wood. Black Tartarian is a good pollinator.

BEES AND GRAPES

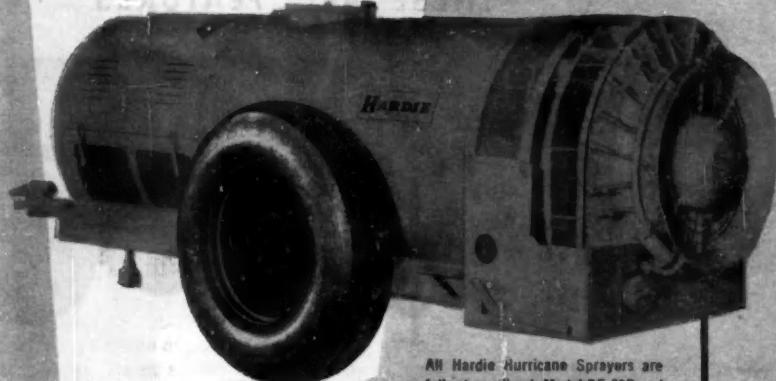
Do bees injure grapes by stinging them?—New York.

Bees and hornets seldom, if ever, initiate injury to grapes. Rather, these insects are attracted to fruit that has already been injured by cracking due to wind and other weather conditions, feeding by birds, etc. Once the skin of the grape berry is broken, it will attract various insects of which the most common are likely to be different kinds of bees and hornets.

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2-FAN

HURRICANE[®] SPRAYER



All Hardie Hurricane Sprayers are fully streamlined. Model DF-26B and DF-24B have unusually narrow tread.

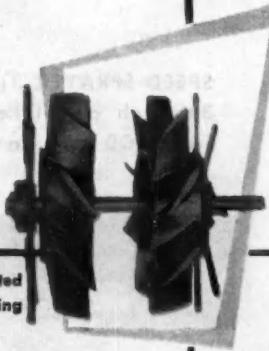
Make this the year you give yourself the best. Enjoy the rich rewards Hardie's new Hurricane 2-Fan Air Blast Sprayer is bringing to growers everywhere. Get the higher quality fruit, and the greater profits that come from this easier, faster, money-saving way to spray. Have a 2-Fan Sprayer and bring your operation up to the new high standard of pest control.

3 MODELS

Model DF-26A. 2, 26 in. fans, Ford V-8 Industrial Engine, 140 HP at 2600 RPM.

Model DF-26B, 2, 26 in. fans, Ford Industrial Engine, 108 HP at 2600 RPM.

Model DF-24B, low priced, 2, 24 in. fans, Willys Hurricane engine, 70 HP at 4000 RPM.



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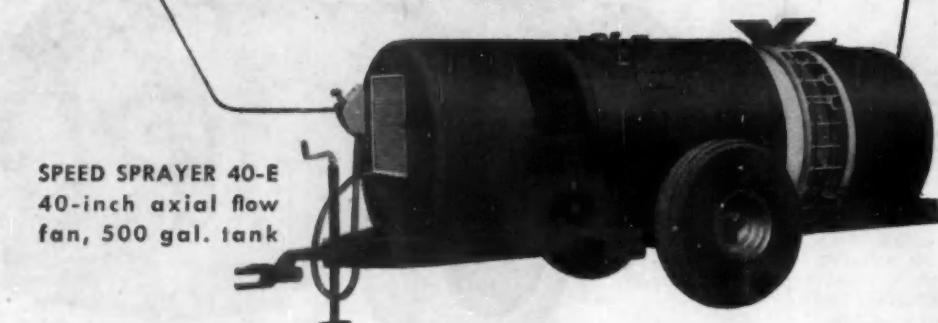


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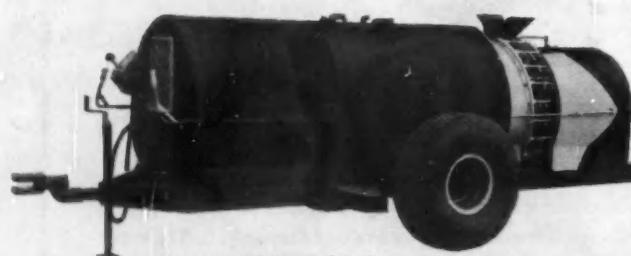
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SPEED SPRAYERS

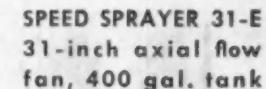
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40-inch axial flow
fan, 500 gal. tank

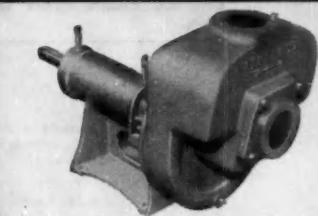
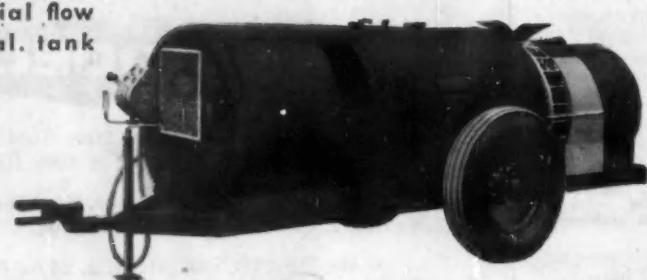


SPEED SPRAYER 36-E
36-inch axial flow
fan, 500 gal. tank



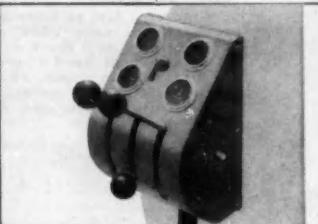
SPEED SPRAYER 31-E
31-inch axial flow
fan, 400 gal. tank

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THESE BONUS
FEATURES



NEW SELF-PRIMING PUMP

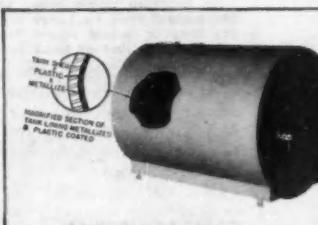
... puts these Speed Sprayers in action as soon as the motor is started. No delays while you prime the pump. Turn the ignition switch — and you're ready to spray.



NEW UNITIZED CONTROLS

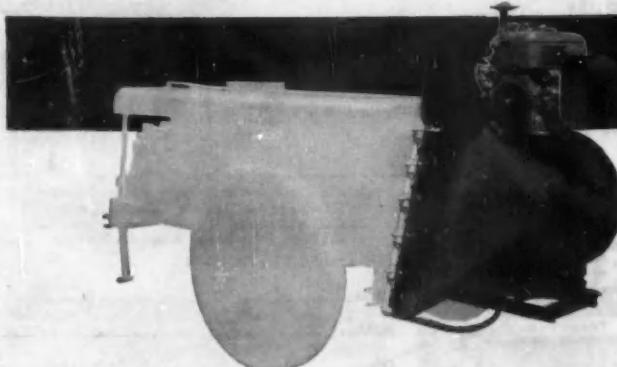
... all engine and spray cut-off controls, including engine throttle, gauges and starter switch are combined in a single unit that mounts on the tractor fender or front of sprayer.

Exclusive Speed Sprayer Air Control •
Positive Mechanical Agitation • New
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... after a sandblasting operation, the inside surface of each tank is protected with molten zinc, then coated with a special synthetic varnish. Result: tanks that are the most corrosion resistant ever developed.



NEW SPEEDAIRE 8 ATTACHMENT
FOR ORCHARD AND ROW CROP SPRAYING

Now air-type spraying is economical and profitable in smaller orchards. The new Speedaire 8 converts any high pressure sprayer, lets you protect your trees and row crops, too. Air handling section with 29" fan turns a full 200° to spray right or left. Simple vane adjustments give you thorough tree-top coverage or a wide field swath as needed.

...you'll save **TIME**
LABOR,
SPRAY MATERIAL 2.

Every year since the first Speed Sprayer opened the "air-age" of orchard spraying in 1941, John Bean has introduced new advancements that have set the pace in orchard spraying. And '56 will be no exception. New Speed Sprayer features — two new Speed Sprayer models — and a versatile new air sprayer attachment — all designed to help

1. New air-sprayer advancement to help you grow better fruit at lower cost!

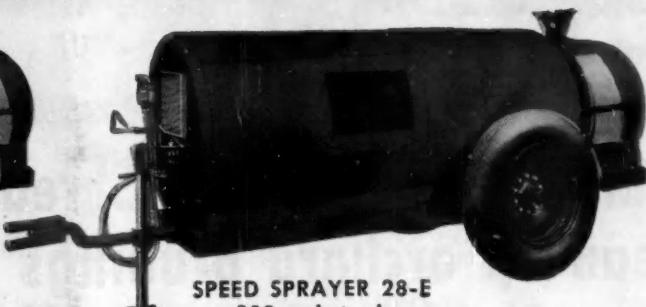
2. The right "Air Age" model to fit your orchard's needs exactly.

you grow better fruit and lower operating costs.

Compare other makes and models for spraying capacity and ease of operation — compare them feature for feature — and you'll see many reasons why you'll BE AHEAD WITH JOHN BEAN!



SPEED SPRAYER 28-E
400 gal. tank

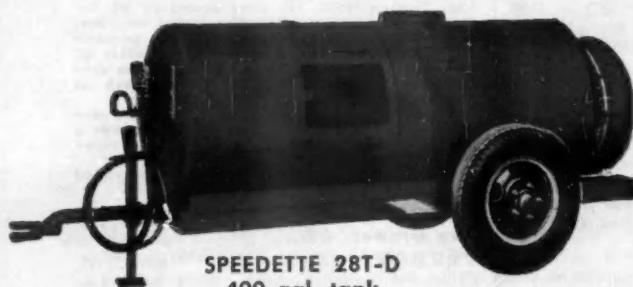


SPEED SPRAYER 28-E
300 gal. tank

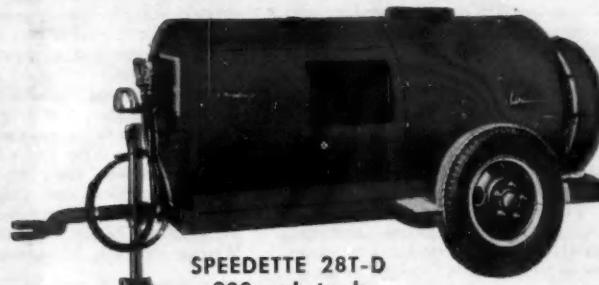
TWO NEW SPEED SPRAYERS . . .

to give you famous, large-volume Speed Sprayer air handling plus compactness and high-pressure pump versatility. You spray your regular rows in minutes —

meet your closest spraying schedules on time — and have high pressure available for other spray jobs.



SPEEDETTE 28T-D
400 gal. tank

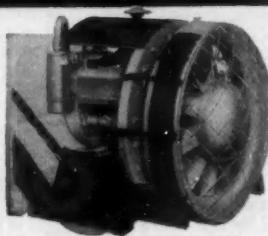


SPEEDETTE 28T-D
300 gal. tank

THE ORCHARD PROVEN SPEEDETTES . . .

provide the cost-cutting advantages of air-type spraying for the medium acreage commercial orchard. Use their high pressure pump capacity for gun-type spraying as needed.

**SPEEDAIRE 12 ATTACHMENT
FOR HIGH PRESSURE SPRAYERS**



Puts the same efficient nozzle delivery and 29" axial flow fan as used in the proven Speedettes in a compact, easy-to-use attachment for high pressure sprayers with adequate pump capacity.



John BEAN

LANSING 4, MICH.
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Division of Food Machinery and Chemical Corporation

Get full details today.
See your John BEAN dealer
or send coupon for NEW
data-packed catalog.

Gentlemen: Send me new catalog L-1142 on the 1956 line of John Bean Sprayers.

Name _____

Address _____

St. or Rt. _____

Town _____ State _____



Brillion Cut-All Rotary Shredders clean up orchard prunings this easy, Shockless, economical way

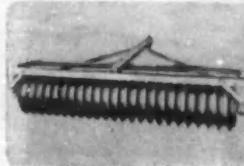
HERE'S the easy way to dispose of orchard prunings — to wipe out one of the big, costly jobs of orchard management.

A few trips down the tree rows with a Brillion Cut-All Rotary Shredder and its whirling blades of steel reduce heavy prunings into a fine mulch that grass soon covers and time reduces to humus. No hand gathering. No bucking. No burning.

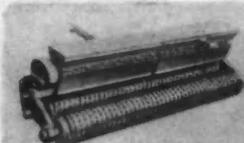
This job is possible with a Brillion Cut-All Rotary Shredder because of its exclusive friction clutch blade control, which cushions the jolts of heavy cutting. You have protection for your P.T.O., transmission gears, bearings, and shafts. Shredding orchard prunings is now as easy on your tractor as mowing hay.

The Brillion Cut-All Rotary Shredder has two sets of two blades. Each set is independently controlled through the friction slip clutch. If a stone, stump, or wire stops one set, the other keeps cutting.

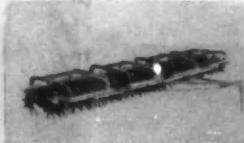
IF BRILLION MAKES IT, IT MUST BE GOOD



BRILLION PULVERIZERS have the weight, strength, and durability for tough soils and loose conditions. Dust sealed roller bearings for fast tractor speeds. Sizes and types to suit all operations.



BRILLION SURE-STAND SEEDERS sow grasses and legumes separately or in combination. Crush, sow, cover, firm in one operation. All seed placed within top $\frac{1}{2}$ inch. Three sizes 5', 8', and 10'.



BRILLION ROTARY HOES cut early cultivations . . . leave a complete mulch, break crusted soils. Exclusive "work-all" wheels. 2-, 3-, 4-, and 6-section sizes — special 2-section pick-up model.

Clip and mail to Brillion Iron Works, Inc., Dept. RS-25-11, Brillion, Wisconsin
Send me complete information on the Brillion implements I've checked below:

Rotary Shredder **Pulverizer** **Sure-Stand Grass Seeder** **Rotary Hoe**

Write your name and address on the margin.

STATE NEWS

(Continued from page 11)

be held December 6-8 at the Civic Auditorium in Grand Rapids. A program is being developed that should attract the interest of all fruit growers. New irrigation equipment, sources of water for irrigation, and the value of supplemental water for higher yields and quality of fruit will be featured.

Apples in Michigan are generally of good quality as badly needed rains and cool weather in September increased both size and color. McIntosh dropped badly in many areas in spite of the use of "stop-drop" compounds. This could be accountable to the poor condition of the leaves caused by the dry, hot August and early September and the build-up of mites in many orchards. Rains just before and during McIntosh harvest made the use of "stop-drop" chemicals more effective on the later varieties.—*Arthur E. Mitchell, Asst' Sec'y, East Lansing.*

Demonstrate Sprayers

ONTARIO, CANADA—Some 600 growers from Ontario, Quebec, and New York attended the Georgian Bay District Fruit Growers Association spray demonstration at the Chrysler Farm in Sudbury. Thirty sprayers, representing eight manufacturers, demonstrated both concentrate and dilute spraying. Discharge ranged from 6 gpm to 110 gpm. Each sprayer was numbered, and spectators could easily compare the machines.

BRITAIN TO IMPORT MORE APPLES

More apples from the United States and Canada will find their way to British markets this year. The British government has approved an import quota of \$1,848,000 for U.S. apples, and \$2,772,000 for Canadian apples. Importers are expected to buy about 30,000 tons of apples. The shortness of the English crop this year dictated the 10 per cent increase over last year.

Any further increase will not come easily, says Truman Nold, executive secretary of National Apple Institute. Standing in the way are: 1) decrease of British exports, due to prospering economy on home markets; 2) opposition by English apple growers; 3) British indignation over recent U.S. actions to curb imports such as bicycles.

The primary asset of American fruit abroad—its superior quality—suffered last year when a surprising percentage of inferior fruit appeared on foreign markets.

Pre-war imports from North America averaged about 200,000 tons a year.

Two Growers Die

VERMONT—James W. Williams, 61, Charlotte fruit grower, and Henry Lee Hemenway, 64, of Bridgport, passed away this summer. Hemenway was a member of the Vermont State Horticultural Society and served as its president in 1945 and 1946. Williams was active in agricultural and civic affairs. He was president of the Chittenden County Farm Bureau for two years and vice-chairman of the Vermont Agricultural Conservation and Stabilization Committee since 1953.—*C. Lyman Calahan, Sec'y, Burlington.*

Apple Prices Low

CONNECTICUT—With an apple crop estimated at 1,780,000 bushels, movement is good, but prices are too low. The crop is reported good. The McIntosh harvest is over. Cortland and Delicious are now being picked, and Baldwin and Spys are about ready (Oct. 8).

A luncheon for members of the press, radio, TV, home economists, teachers, and dental workers was given in Hartford October 6 by the Connecticut Pomological Society and the New York & New England Apple Institute. The film, "Gateway to Health," was shown, and McIntosh apples furnished by Orrin Kilbourn were distributed.—*S. P. Hollister, Sec'y, Storrs.*

Prominent Grower Dies

MASSACHUSETTS—Ernest F. Markert, 49, of South Amherst, died September 11. Brought up on a dairy and fruit farm, he was graduated from the University of Massachusetts, where he was an outstanding fruit student, in 1926. He was orchard foreman at the Congers Farm in Connecticut, then manager of the Sonhegan Apple Packing Association in New Hampshire. He held several important fruit growing jobs while developing the Markert Orchards and Cold Storage plant in South Amherst. He was a member of the Massachusetts Fruit Growers Association.—A. P. French, Sec'y, Amherst.

Flood Damage to Trees

NEW JERSEY—Late apple varieties sized well in spite of severe heat and drought. Harvesting is on schedule, with Red Delicious completed about October 1 in most areas. Most Red Delicious are sold. Heavy Stayman harvest began about October 1 with red sports. The Stayman crop is of excellent finish and quality. Rome harvest will be somewhat simultaneous with Stayman and completed around November 1.

Appreciable damage to young peach

trees from heavy August rains became apparent during the middle of September. Waterlogged soils caused death of trees in many peach areas. This occurred on rather sandy soils, as well as heavy soils. More than 14 inches of rain fell in one week.

The New Jersey 7-A strawberry selection has been named "Jerseybelle."—Ernest G. Christ, Sec'y, New Brunswick.

BIGGEST 'MAC' CAMPAIGN

The greatest advertising drive in McIntosh history was conducted this fall by the New York and New England Apple Institute to help move the big, top-quality apple crop. For four weeks beginning September 19, \$45,000 was allotted for advertising, of which \$15,000 was used to develop outside markets. A 1,000-line advertisement in 44 leading daily newspapers heralded the arrival of Macs, and 774 broadcasts on 54 top radio and TV stations further plugged their sale.

Pecan Prospects Bright

OKLAHOMA—Prospects of harvesting a better-than-average pecan crop are improving. Estimates have climbed to nearly 30 million pounds.—Fred LeGrone, Asst. Sec'y, Stillwater.

Peach Rust Hits Trees

GEORGIA—Trees in the Fort Valley

area were defoliated by peach rust by mid-September. This disease usually occurs later in the season when it is of little practical significance.

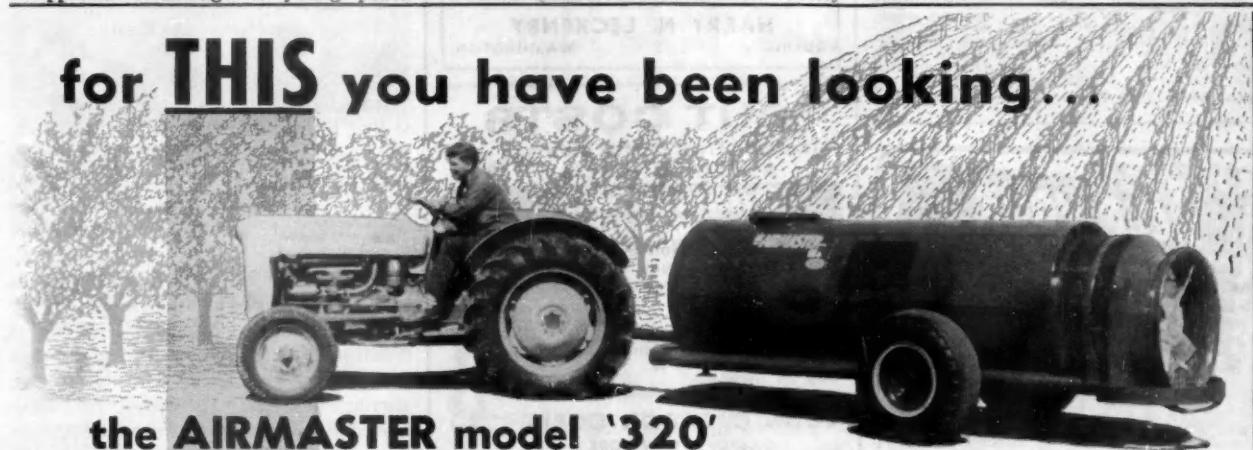
Growers are making plans to replace trees lost in last spring's freeze. Fruit bud set appears to be heavy throughout the entire Georgia peach belt.—E. F. Savage, Experiment.

Golden Jubilee

TENNESSEE—The Tennessee State Horticultural Society will hold its 50th Jubilee, meeting at the New Southern Hotel in Jackson December 8-9. Although our membership is at a 25-year-low—something under 300 members—and this year's unprecedented March freezes hurt them seriously, their spirits are still high. We attribute this fine spirit to our oldtimers who have withstood the ravages of nature time and again and come up fighting. We plan to honor them at this meeting.

Our oldest members are I. C. Murphy, of Columbia, who joined in 1906, and S. N. Varnell, of Cleveland, who joined in 1908. Horace Rainey, Sr., Columbia, and D. E. Hedges, Chattanooga, have been members for over 40 years, and John Mir, Hendersonville, 39 years.—A. N. Pratt, Sec'y, Nashville.

for **THIS** you have been looking...



the AIRMMASTER model '320'

If you grow peaches, cherries, grapes, or close-to-the-ground fruits, this—the AIRMMASTER '320'—is what you have been looking for! Check it over—for air volume, clearance, tank capacity, etc.—and you'll want it.

AIRMMASTER '320'—air volume—the 32" axial flow fan delivers 26,000 cu. ft. per minute at 85-90 mph. This means deep, thorough penetration...not merely the outside leaves.

AIRMMASTER '320'—clearance—built low (adjustable clearance 7"–13") so that the spray material actually goes up to reach low foliage and give complete coverage of vines and trees.

AIRMMASTER '320'—tank capacity—300 gallon capacity means less time spent in refilling...more actual spraying time. Positive mechanical agitation means more effective spray material, less clogging.

AIRMMASTER '320'—Ford 172, four-cylinder industrial engine—ample, dependable power for both fan and the FRIEND NX hi-pressure pump that delivers 18 gpm. at 400 lbs. pressure. Power enough to reach the top of the tallest trees.

ADDED FEATURES... comes complete with nozzles and one-man controls for one or two-way spraying...option of Marlow low pressure centrifugal pump (50 gpm. at 50-80 lbs. pressure)...7 x 20" rims (less tires) standard equipment...36" mire-proof, airplane-type tires available at extra cost. And SPECIAL! new Stewart-Warner Safety Panel controls for positive engine protection.

We think you'll agree that the AIRMMASTER '320' is tailored to the fruit grower's needs. Why not drop around to your dealer's and see whether we're not right? And while you're there have him show you the other items in the FRIEND line—airblast and boom sprayers, high-pressure pumps, and FRIEND Commander utility spraying rigs. They're all efficient and dependably well-built. We're sure we have a FRIEND for you!

CLIP and MAIL

Please send me information on the FRIEND

AIRMMASTER '320' Row Crop Sprayers
 Airblast Sprayers Commander Utility Sprayers

NAME

ADDRESS

TOWN

STATE

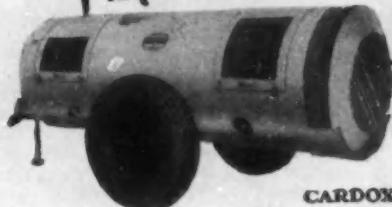


MANUFACTURING CO., INC. • 11 EAST ST. • GASPORT, N.Y.
(Canadian Distributor • LEE Equipment Company, Stoney Creek, Ontario)

Still Further Ahead
for '56!

See the NEW 1956
CARDOX

AQUA-JET SPRAYERS



CARDOX CORPORATION • Bell Bldg., Chicago 1, Ill.
San Jose, California • Menomonee, Illinois • Ottumwa, Iowa

Even better than the CARDOX Aqua-Jet Sprayers that set new highs for fast, easy, low-cost spraying and clean fruit!

Before you buy any sprayer, see the CARDOX Aqua-Jets for '56, or get the facts from your CARDOX dealer. A complete range of sizes and capacities for every spraying job—all employing the famous CARDOX Aqua-Jet principle endorsed by owners as the finest in the field.

CONTROL ENGLISH SPARROWS



Foolproof New Trap

Now you can control English Sparrows around "elevator-type" Havahart Trap. Factory built. No resetting, bait lasts for weeks. Humane. Songbirds released unharmed. Low price. MONEY BACK TRIAL OFFER. Write today for free illustrated literature.

HAVAHART, 176-N Water Street, Ossining, N.Y.

STOP LOSING PROFITS

Use orchard tested deer repellent,
DIAMOND (L) BRAND

It will make you money

HARRY N. LECKENBY
DUVALL WASHINGTON

CUT COSTS

To make a Profit on Fruit Growing

PRUNE with

Orchardkraft

Air-Power PRUNER

Sizes for all your work from the SMALLEST CUTS that you would make with a HAND SHEAR to the largest cuts that you would make with ANY SHEAR.

Our ORCHARDKRAFT Air Powered PRUNERS are designed for Fruit Growers, by people who have supplied Fruit Growers' needs for over 50 years.

Write for circular, sending us name of your nearest Fruit Growers' Supplies dealer.

JOHN C. BACON CORP.
GASPOT, NEW YORK

**KEEP YOUR
TEETH
FILED RIGHT!**

Not your "eating" teeth.
Your saw chain teeth. The teeth that make your chain saw an efficient cutting tool.

Keeping your saw chain teeth filed right is mighty important. Correctly filed saw chain teeth literally give your saw the edge . . . mean smoother, faster cutting . . . increased timber cut . . . longer chain life . . . economy in time and labor.

To be sure your saw chain teeth are filed right:

- (1) Carefully follow manufacturer's instructions when you do your own filing;
- (2) Take advantage of your chain saw dealer's professional filing and chain maintenance service.

When you have a chain saw problem of any kind . . .

SEE YOUR DEALER

Yours for saw chain
at its best.

Fast-File Freddie
OF OREGON



OREGON-SIZE YOUR SAW
with OREGON CHAIN and ACCESSORIES

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OREGON SAW CHAIN CORP.

PORTLAND 22, OREGON

A New Method of Scald Control

By R. M. SMOCK

Cornell University

DURING the 1954-55 season all the known methods of reducing scald on apples and a number of possible new methods were studied. It was found that a dip treatment of diphenylamine plus a wetting agent after harvest gave better scald control than oiled paper. The best concentration was 1,000 parts per million (ppm) but less dilute material may do a satisfactory control job. With Cortlands there was 78 per cent scald on the controls, 8 per cent with oiled wraps, and 1 per cent with diphenylamine at 1,000 ppm. With Greenings a concentration as low as 200 ppm did not completely control the scald.

To get two seasons' results in one calendar year the author requested Dr. D. Martin and Dr. E. Hall in Australia to check on the Cornell results. They independently found better scald control than with oiled wraps and no unfavorable results. Martin also found that wraps impregnated with diphenylamine gave excellent scald control.

A number of experiment station workers are already working on the practicality of using DPA as a dip treatment or impregnating agent and the results should be known by the spring of 1956. Of course, this new material will have to be approved or disapproved by the Pure Food and Drug Administration. Hence, expensive toxicological studies will probably be required.

While much work remains to be done, this new approach to the scald problem does look promising.

MOON MOVES UP AT JOHN BEAN

HOWARD H. (Pete) Moon has been promoted to assistant sales manager of the agricultural department of John Bean Division, Food Machinery and Chemical Corp. From company headquarters in Lansing, Mich., he will correlate the sales and advertising programs for eight eastern territories.

Moon came to John Bean in 1952 from the International Harvester Co., and has been district sales manager in New England.



H. H. Moon

ORDER BY MAIL

Keep Crop Destroyers ON THE RUN!



The Original
CAW-CAW
Firecracker
FUSE ROPE

Small Cost —
Big Protection Against
Bird and Animal Damage!

Specially twisted fuse rope explodes firecrackers or cherry bombs at timed intervals in fields. Slow-burning—one 48-ft. hank covers 6 to 8 acres for 96 hours. Easy to use—insert firecracker fuses in rope strands, hang on tree limb or stick. Recommended by county agents and agricultural colleges.

SALUTES, CHERRY BOMBS, FIRECRACKERS

If your state requires permit, your nearest fireworks dealer can supply details. Name of fireworks dealer near you on request.

DEALERS! Write for details!

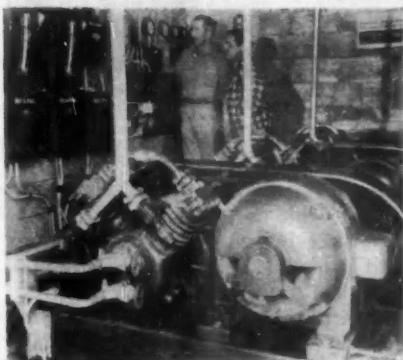
J. E. FRICKE CO.

Dept. AF-1, 40 N. Front St., Phila. 6, Pa.

FRUIT STORAGE

(Continued from page 7)

Air must circulate freely and positively in the storage room. If sufficient height, say a foot or more, is available over the top of the fruit and the throw is not too great, ordinary blade-type propeller fans may be used. Close stacking or low headroom sometimes dictate ductwork and squirrel-cage type blowers. In either case have direction of air flow parallel to rows of boxes.

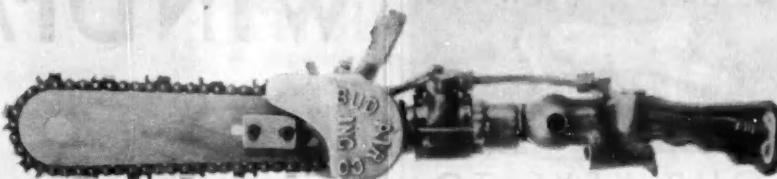


Refrigeration room of Auvil Fruit Co., Oroville, Wash., with General Electric condensing units in foreground. Grady Auvil (left), past president of Washington State Horticultural Association and 1954 "Grower of the Year," and Art de Desrochers, are shown inspecting the installation.

Close temperature control without wide variations is very desirable. A simple thermostat with no more than a one degree operating point gives good control. In the Pacific Northwest apples are stored at 31 degrees, which makes it necessary to defrost the coils periodically. Of many methods, spray water defrosting and hot gas defrosting seem outstanding; and simply defrosting manually seems superior to costly, intricate, automatic control. Do not be talked into installing a cooling coil that eliminates defrosting entirely by spraying corrosive calcium chloride or salt brine continuously over cooling pipes. That method solves one simple problem by giving you ten worse ones. If you are maintaining temperatures 33° or above, defrosting is no problem.

Only a competent refrigeration man can decide what horsepower capacity is needed. But for guidance in estimating, here is a "rule of thumb" that the writer has worked out and found very successful. Figure out in pounds how much fruit you are going to load into the cold storage in an average day during picking. For every 5,000 pounds you will need 1½ h.p. of installed refrigeration capacity. In extremely hot weather the amount loaded may raise the room temperature above the desired point, but it won't overload equipment otherwise. THE END

BUD Pneumatic Pruning Equipment and Air Devices



NOW AT LAST

WITH THE ADVENT OF THE "Bud" Pneumatic Chain Saw, we can announce a complete line of power pruning equipment to meet every fruit growers' demand, for fast economical precise pruning. The "Bud" chain saw is light in weight, well balanced, easily maneuvered for fast, efficient cutting. 3', 4' and 6' extensions available. Cut your pruning costs as much as 50% with "Bud" Pneumatic Pruning Equipment.

Write us for full particulars.

BUD-AIR CO., INC.
PULASKI, NEW YORK
Phone—Pulaski 336

Power Pruners
Pneumatic Chain Saws
Compressors & Accessories

LIFT OR LOWER — FLOOR TO FLOOR — WITH A STANDARD INCLINEBELT



Move boxes, cases, cartons, sacks or bundles from basement to first floor, or any floor to floor — continuously with the Standard Inclinebelt. Compact — simple to install — minimum maintenance and attention. Lifts or lowers 10 to 20 lbs. of live load per ft.; floor elevations of 8 ft. to 14 ft. 6 inches inclusive; two belt widths to handle commodities 15½ inches to 25½ inches wide. Electric motor operated. Write for INCLINEBELT Bulletin — address Dept. AFG-115.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
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Standard
GRAVITY & POWER CONVEYORS

The Complete Corkboard INSULATION SERVICE

From engineering design to complete erection, United Cork Companies offers complete service on B.B. (Block-Baked) Corkboard through its chain of branch offices from coast to coast.

Each installation of United Cork Companies' B.B. Corkboard is specifically planned for the requirements of the individual fruit storage area. And each installation is followed up by United Cork Companies' engineers to assure full satisfaction to the fruit grower.

You are invited to discuss your low-temperature insulation requirements with us.

UNITED CORK COMPANIES
6 Central Avenue
KEARNY, NEW JERSEY
BRANCH OFFICES IN PRINCIPAL CITIES

Stauffer's

FOUR KEYS TO Successful Fruit Growing!

Careful orchard management . . . planning crops to coincide with consumer demand and labor availability.

Conscientious application of the latest spraying, thinning, irrigation and fertilizing techniques, to obtain highest grade fruit.

Efficient, mechanized picking and packing operations, to keep overhead down.

A spray program, using reputable insecticides, fungicides, and miticides.

Literature on Stauffer's complete line of agricultural chemicals for fruit growers is available from any of our offices or from Stauffer dealers coast to coast.

STAUFFER Wettable Powder and Emulsifiable Liquid Formulations: Aldrin • Aramite • Captan 50-W • DDT • Dieldrin • Malathion • Ovez • Parathion • BHC • Chlordane • DDD • Endrin • Heptachlor • Lindane • Toxaphene . . . also Paraflow and Systox . . . and a complete line of Agricultural Sulphurs.

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CHEMICAL
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STAUFFER CHEMICAL CO.
300 MADISON AVENUE, NEW YORK 17, N. Y.

WINDFALLS

It is said that Isaac Newton while sitting under an apple tree was struck on the head by a falling apple. Thus he conceived the great truth of his Law of Gravitation.



By HENRY BAILEY STEVENS

Why Not Win FROM where I sit This Game?

I can see the cheerleaders crouch and spring into the air, swing their arms with masterful punctuation, and shout through their megaphones the college yell. This is the invocation to Team Spirit.

*Rah, rah, rah!
Da-da-da!
Wah-hoo-wah!
TEAM!*

The band is pounding and blowing a contagious marching tune. "On to Victory" is the theme. We must win the game.

Meanwhile at home we are suffering silently the most serious defeat our little orchard has known. Worse than the hurricane has been this year of 180 per cent production with its huge early drop and a sagging dog-day market. Apples in New England are too plentiful this fall. Every backyard tree is loaded. Buyers hang back. The grower without cold storage and with high labor costs has lost his shirt.

Many of us will go out of business after this season, for our organization has not been geared to take such a beating. Somewhere in the scrimmage we missed a play. We fumbled the ball when we should have run with it.

Perhaps what we need is a band and a few cheerleaders. Tree fruit is a superior product, not yet fully appreciated by the general public. What else on the market is so delicious, so palatable, and so healthful as the juicy tree fruits and the protein-packed tree nuts? These products of the vast underground root systems and overhead sea of foliage should always command a superior price. The public holds it too cheaply, spending far more for worthless cola drinks and dangerous cigarettes.

Suppose we ourselves begin to take

all tree fruit more seriously. Instead of just serving nuts for Thanksgiving and Christmas, for example, why not build them into the daily bill of fare? For us, members of the primate family, they are the ancestral protein food. I for one am going to supplement our store of experimental filberts and native butternuts with orders for Southern pecans and Western walnuts and almonds. Along with them a supply of dates and figs will make a marvelous combination.

We solicit more ideas on this score. A windfall for the best one. Wah-hoo-wah! Tree fruit! Rah!

While ELMER H. HUSSEY, Washing who lives in Bronson, His Own Kans., writes that the lines below came to him as he was washing his breakfast dishes. He now lives alone.

Growing Old

*Love grows stronger as friends grow fewer
The headstones thicken along the way,
And those that walk with us today
May let us walk alone tomorrow.
Seldom do we get far from sorrow,
And some of those we loved the best
Have many years been laid to rest.
Love grows stronger as friends get fewer,
The courage is less to do and dare,
Closer we come to the reefs of Care,
And Love is all as our sun dips west.*

Mr. Hussey has been interested in the experimental use of sulfur bored into the trunks of pears and apples to prevent blight. The idea was passed on to him years ago in Tonkawa, Okla., as an old Indian remedy, and he has tried it with some promise.

The Curving Mourning Dove "THE whistling wings of the curving mourning dove help to identify this game bird as it curves in low flight," writes John B. Behrends. "They do not form in flocks, but are found singly or in small groups. A flimsy

AMERICAN FRUIT GROWER

structure of but a few dry grasses or weed stems serves as a nest—often on a low horizontal branch. Sometimes the two white eggs are laid upon the bare ground in the midst of waving grain.

"In an orchard I have found them on the remaining mud foundation of an old robin nest. A mother bird, flushed from her nest, will pretend that she is lame or has a broken wing, and will creep and flutter along to draw us away from the site. When she has led us quite a distance, she will give up the ruse and fly into the air.

"In spring and early summer they are quite tame, but when the law permits them to be hunted they grow wary. They are fond of weed seeds and grain. One morning I saw these gray birds continually fly up from the stretch of paved highway ahead of me. Grains of wheat had filtered through cracks in the big trucks en route to the elevator, and the graceful creatures curved to the right and left alongside of me flying in all directions. Their mournful song has given them their name. They have red feet and brown eyes."

Address your "Windfalls" contributions to Henry Bailey Stevens, AMERICAN FRUIT GROWER, Willoughby, Ohio.

BUNNIES PASS UP PAINTED TREES

A NEW use for lime sulfur has been found by Michigan fruit grower Frank Willis, Sr., of Lawton. He's found that it makes a very effective rodenticide when painted on the trunks and lower limbs of his young peach trees. It's simpler and more effective than wire screens, says Willis, and it really keeps the mice and rabbits away.

"I lost a good many trees until I started using lime sulfur," says Willis. "I am getting 100 per cent control now with no injury to the peach trees."

The lime sulfur liquid is brushed on the trees in the fall before any mice or rabbits start their work. Willis fastens a 4-inch paint brush to a 3-foot handle for brushing the liquid lime sulfur on the trunks, lower crotches, and limbs of the young trees. By using a wide brush, enough of the lime sulfur spills on the grass around the trees to make it mouse-proof also. He uses a small pail to hold the lime sulfur, and suggests goggles to protect the eyes while brushing.

This year Willis planted 300 dwarf apple trees which he plans to protect by this method. He feels certain the lime sulfur treatment will work as effectively on apple trees as it has on peach trees.—R. F. Carlson, Michigan State University, East Lansing.

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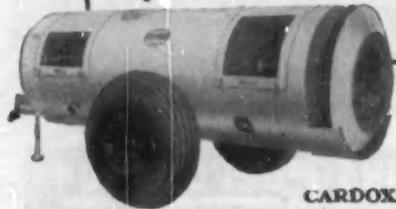
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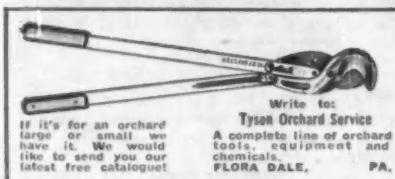
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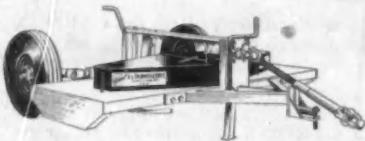
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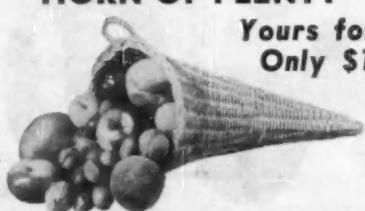
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At this low price you'll want several . . . for yourself and for Holiday gifts.

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NEW STYLES
In Berry Trays



Strawberries are packed in corrugated containers by Graffrath Brothers, Rochester, N.Y., dealers. First used on a trial basis last year, the boxes were so well received by growers and buyers that several carloads were used this season. Loading berries onto truck at farm of Arthur Rickman and Sons, Greece, N.Y., are, from left: L. A. Bailey, eastern representative of Fruit and Produce Packing Co.; Robert Rickman; and Paul Graffrath. The boxes are two-piece telescope automatic setup style made by Fruit and Produce Packing Co., 700 W. Morris, Indianapolis, Ind.



Red raspberries in steel-rimmed wooden baskets are packed in green corrugated trays by Puyallup Berry Growers, Puyallup, Wash. Lightweight trays are real freight-savers, can be printed on all sides in more than one color. Baskets and trays are made by Pacific States Box and Basket Co., 2315 Santa Fe Ave., Los Angeles 58, Calif. Trays hold 12 pints, are shown stacked for shipping in wooden crates.



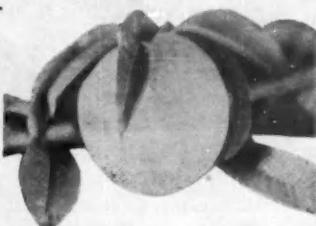
A new corrugated cardboard strawberry flat came through a strenuous haul from New Albany, Ind., to Grand Rapids, Mich., in tip-top condition—even though wooden berry crates were piled on top of the flats in the truck. Buyer Richard Verhey (left) and Robert Blett, who designed the new package for American Box Board Co., Grand Rapids, Mich., examined the berries on arrival. The 8-quart flat features twin compartments, can be divided to make ideal "take-home" packages.

AMERICAN FRUIT GROWER

PLANT VIRUSES

(Continued from page 10)

virus disease control which is receiving more and more attention. The big difficulty in this approach is the problem involved in initial location of the vector or vectors of the disease agent. This is a long, complicated procedure. The insect *Colladonus genimatus* (to use the latin binomial) was incriminated in 1949 as a vector of the Western X-disease virus in peaches—but only after some 11,000 transmission attempts.



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Or write for circular to

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P.O. Box 877, Red Bluff, Calif.

Whatever the control program that is finally found to be effective, it will have to involve nursery practice in the case of fruit plants. The most effective measures designed will be lessened in over-all effectiveness if the replacement stock from nurseries were allowed to bring in and spread infection among the trees or other plants in the field. This means two things: the nurseryman must become even more of an "expert" than he

MARK YOUR CALENDAR!

Three important meetings are on tap for growers in the Northwest. The 70th annual "Three Score and Ten" meeting of the Oregon State Horticultural Society will convene December 1 and 2 at Oregon State College, Corvallis.

A few days later the Washington State Horticultural Association will hold its 51st annual meeting at Wenatchee. Facilities for an estimated 15,000 growers have been booked for this meeting at which a critical issue—marketing—will head the agenda. Directly on their heels—December 7 and 8—the Nut Growers Society of Oregon and Washington will hold its annual meeting at McMinnville, Ore. Sounds like a busy December in the Northwest!

formerly was, because he must be able to distinguish between symptoms caused by infectious agents and those due to other conditions such as weather, nutrition, etc. It also means that strict programs of nursery inspection must be set up by state agencies.

In the meantime, the grower has no recourse but to train himself in the detection of the symptoms which will lead him to the sources of virus infection.

THE END

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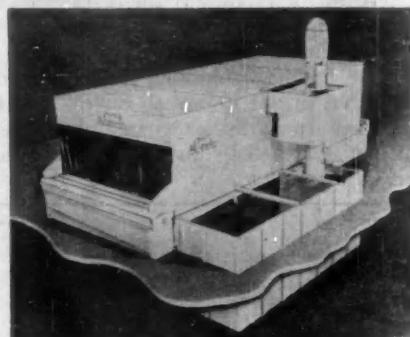
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A new stericooler incorporating grower
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New trucks are beginning to get as eye-appealing as new cars. One new truck

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that took our eye is the one pictured above. However, eye appeal isn't all these new beauties have. New 140 h.p. engines, cab comfort, rugged construction and sound engineering makes this new line of S trucks ideal for the fruit and vegetable grower. Why not have the full description and specifications on them? Just write to International Harvester Co., 180 N. Michigan Ave., Chicago 1, Ill.

Tractor Tire Know-how



Many growers are failing to get the full wear and traction from their tractor tires. Either under-inflation or over-inflation is the biggest cause of tractor tire failure. Our friends at the Firestone Tire & Rubber Company have made available to our readers, free of charge, a new easy-to-use tractor tire air gauge. It's simple to use and you can get yours by merely going to your nearest Firestone dealer and telling him you are a reader of AMERICAN FRUIT GROWER.

Melon Growers Report



Melon growers in Michigan, by adopting a new melon box which gives greater protection to distant as well as local markets, have cut losses drastically and increased their profits. The new box provides proper ventilation and protection from bruising. Easily assembled without special tools, the box appeals to truckers and receivers because it handles well. Why not get full information on this new box? Write Mr. E. O. Goll, American Box Board Co., 470 Market St., S.W., Grand Rapids 2, Mich.

NOVEMBER, 1955

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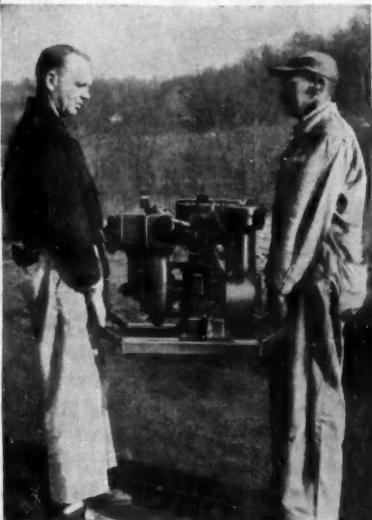
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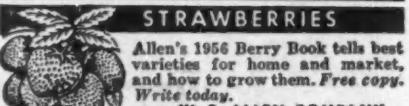
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From where I sit ... by Joe Marsh

Tie This One For Consideration—

Closed the office early last Saturday to go after pheasants with Pops Foster. I used fewer shells than the old gentleman and took home more birds—but not because I did better shooting.

I'd borrowed a dog for the occasion. Pops took along Blue, his ancient pointer. Several times I noticed Pops walk up to a clump of bushes Blue had pointed at and fire into the air—though he hadn't flushed a single bird.

Naturally, I wanted to know why. "Well," he said sheepishly, "I've been hunting with that dog for 11 seasons. His nose isn't much

help any more—but I'd rather waste a shell than let him know."

From where I sit, Pops always shows consideration for people, too. For instance, this is a small thing, but he puts a bottle of beer on ice for me when I visit him—though he never takes anything but coffee himself. Even if he doesn't agree with me on a matter of personal choice (which is his right) he'd rather not make a "point" of letting me know.

Joe Marsh

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NEW PEACH FOR NORTHERN AREAS

A NEW winter-hardy peach, Meredith, has been developed for northern peach growers. Developed at the New Jersey Experiment Station in 1924, it did not do too well in that climate, and was not named.

Because it was hardy, however, a tree was sent to New Hampshire in 1950 for testing in the southern section of the state. It survived the cold winter and produced large fruits of acceptable quality in the relatively cool New Hampshire summers. The variety was then deemed worthy of a name.

Meredith is worthy of trial in the northernmost areas where peaches can be grown. It is best for home use and nearby markets. Fruit is an attractive red, yellow-fleshed, freestone.

SMALL FRUIT BULLETINS

HEAVY demand for information about new small fruits developed at the New York Experiment Station, Geneva, has resulted in a reprinting of the bulletins describing them. The reports were prepared by George L. Slate, small fruit specialist, and deal with strawberries, raspberries, and blackberries.

Strawberries include Empire, Eden, Erie, Essex, and Dresden. Raspberries include September, Amber, and Milton. Blackberries include Bailey and Hedrick. Planting stocks of all of these fruits are available from nurseries or through New York State Fruit Testing Cooperative Association at Geneva.

CRAB APPLES FOR AMERICA

A REVISED edition of *Crab Apples for America* by Donald Wyman, horticulturist, Arnold Arboretum, Jamaica Plain, Mass., has just been issued. The booklet includes a complete list of all crab apples, those which are best for ornamental flowers and fruit and those having edible fruits. Origin, description, and source of supply are given. A list is also included of obsolete varieties. Copies are available from The American Association of Botanical Gardens and Arboreta, 1632 Chestnut St., Philadelphia 3, Pa., at \$2 each. In quantities of 10 to 24 copies, the cost is \$1.60 each; 25 to 100 copies, \$1.20 each.

Working drawings of an inexpensive Plastic Greenhouse, prepared by the University of Kentucky, together with descriptive leaflet, may be obtained for 25 cents in coin or stamps from AMERICAN FRUIT GROWER, Willoughby, Ohio.

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1—500 GAL. BEAN SPRAYER, 58TR; 1—300 gal. Bean, Model #48; 1—500 gal. Myers, TR; 1—300 gal. Bean, Model #20MT; 1—200 gal. Iron Age, TR; 1—Aqua Jet Blower attachment; 1—Bean Speedaire; 2—Royal Bean pumps; 1—Apple Grader, Brusher and Turner; 12,000 new and used crates; 1—Spartan sprayer; ladders. **CORY ORCHARDS**, Cory, Indiana.

GOOD USED FARM CONTAINERS—SPLINT handle baskets, bushels, boxes, hampers, bags, nailed and wirebound crates. Truckload or carlots. Call or write **ZELVY BROS. CONTAINER CO.**, 2005 Orange Ave., Cleveland, Ohio.

WHITE OAK CHARRED BARRELS—FRESHLY emptied, 50 gallon. Prices: \$4.00 each, 10—\$35.00, 20—\$65.00. Write for prices on larger quantities. All f.o.b. Peoria, Illinois. Terms—money order or certified check with order. **SHOW-OFF ORCHARDS PRODUCTS CO.**, 107 N. Washington St., Peoria, Illinois—Phone 4-4128.

USED FRUIT WASHER, APPLE GRADER and peach sizer. Priced to sell. **O. A. NEWTON & SON**, Bridgeville, Delaware.

FOR SALE BY ESTATE HALE SPRAYER used two seasons. Bargain. **JIM HADDAN**, 1441 Field Drive, Noblesville, Indiana.

FOR SALE: ONE FARQUHAR HYDRAULIC cider press with hammers, grinder, elevator, rotary sieve and two apple butter coils. All in good condition. Price very reasonable. Also boilers for every purpose, automatic or hand fired. Farm machinery and etc. Write us your need. **ARTHUR S. YOUNG CO., INC.**, Kinzers, Pa.

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FOR SALE—APPLE ORCHARD, TOGETHER with growing crop, located 6 miles NW of Louisiana, Missouri. Modern home, packing sheds, fully equipped. 197-A in farm; about 100-A growing apples. Selling to settle estate. See **G. N. REDMAN**, Agt. or **HARRY HATCHER**, Manager of Orchard—Barry, Illinois.

35 ACRES—APPLES, PEACHES, PLUMS—near Lake Huron. For information write Owner, **BRENNAN'S ORCHARD**, Yale, Michigan.

FOR SALE: NEBRASKA ORCHARD, 105 acres. A young vigorous orchard with 12 acres of vineyards. Close to an excellent market. Contains 1,300 young 9 and 11 year old trees just coming into production and 425 trees 30 years of age all desirable and very marketable varieties. Includes packing, grading and other orchard equipment. Well located—Near to Market. Good production. Nemaha County, Nebraska. Call or write **BYRON REED COMPANY**, Omaha, Nebraska.

HELP WANTED—FEMALE

\$30.00 WEEKLY MAKING ROSES. EASY. Write, **STUDIO COMPANY**, Greenville 14, Penna.

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A golden opportunity to sell top quality fruit trees for one of the largest and best growers in the Midwest. Your customers will be more than happy with Ilgenfritz stock. Excellent returns if alert and ambitious. Agents wanted for all fruit producing areas in Michigan, Ohio, Indiana and Wisconsin. Full and part time men considered. For details write immediately, Ilgenfritz Nurseries, Inc., 4708 Monroe Street, Toledo, Ohio.

MAKE IT YOURSELF

MAKE TRACTOR YOU'LL LIKE, inexpensive, practical, few simple changes, from discarded automobile, three speeds, reverse. Printed details—send four dimes. **TRACTORMAN**, Box 1446, Zephyrhills, Florida.

MISCELLANEOUS

500 GUMMED STICKERS PRINTED WITH your name and address—65c. **ARTPRINT**, Box 166, Sheboygan 11, Wisconsin.

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"Yep, Maw quit her diet . . . says our new B. F. Goodrich Power-Grip tractor tires is so wide they make her look plumb skinny!"

Measure the tread of leading makes of tractor tires. You'll find that no other tire is wider than the big, new B. F. Goodrich Power-Grip tractor tire. Now count the cleats. Time after time you'll find that in the same size Power-Grip tires have more cleats. This means Power-Grip tires deliver more pulling power. They take a bigger bite of the soil to give maximum traction in forward or reverse. Extra cleats mean extra tread rubber—and that means you get longer

service from Power-Grip tires. And these cleats are square cut at the shoulders. The result: you work faster, without fuel-wasting slippage. See Power-Grip tires today at your B. F. Goodrich retailer's. You'll see a tire that's bigger all around to do a bigger traction job for you. His address is listed under Tires in the Yellow Pages of your phone book. Or write **The B. F. Goodrich Company, Tire & Equipment Division, Akron 18, Ohio**.

An advertisement of B. F. Goodrich—First in Rubber

BERRY BOOK: "THIRTY YEARS OF BERRIES." Raspberries and Strawberries. 84 pages, price \$1.00 Ppaid. **ROY TURNER**, 315 Livingston St., Peoria, Ill.

HAVE YOUR OWN AIR CONDITIONED cold storage. Consult experienced engineering concern specializing in Fruit Storages. Postal card reply **O.K. INDUSTRIAL ENGINEERING CO.**, 67 Hurlburt Ave., Akron 3, Ohio.

LATEST WALNUT CRACKER, DIRECT from manufacturer. **BENN THOMPSON**, Harrisonburg, Virginia.

NATIONALLY KNOWN PRODUCTS: ELECTRIC hair clippers, hair dryers, body massagers, head-face vibrators, scissor grinders, foot massagers, \$10 each. Animal clippers \$25. Barber's razors, scissors, thinning shears, hair clippers, straps, hoses, \$4 each. **FENDRICKS**, 114 N. 6th Street, Allentown, Penna.

MAILING LISTS—100,000 CAREFULLY SELECTED names in the Agricultural Field. Individual lists of Potato Growers, Tomato Growers, Corn Growers, and many others. Ideal for firms wishing to contact leading growers and dealers. For details write: **MACFARLAND CO.**, Box 5, 8 Elm St., Westfield, N.J.

PECANS

PECANS—NEW CROP "STUARTS" U.S. NO. 1 Direct from Grower. 3 lb.—\$2.85; 5 lb.—\$4.45; 10 lb.—\$8.65 Postpaid. 25 lb.—\$15.75 FOB shipped express. **JAMES BOGGS**, Route 1, Fairhope, Alabama.

PINKING SHEARS

ONLY \$1.95 POSTPAID. CHROMIUM plated, precision made. Manufacturer's Christmas overstock. Guaranteed \$7.95 value or money refunded. Order by mail. **LINCOLN SURPLUS SALES**, 1704 W. Farwell Ave., Chicago 26, Illinois.

RABBITS

EARN UP TO \$400 MONTHLY RAISING Angora, New Zealand rabbits. Plenty markets. Particulars free. **WHITE'S RABBITRY**, Jackson, Mich.

TRADE MARKS

NATIONAL TRADE MARK COMPANY, Munsey Building, Washington 4, D.C.

Cherries and Price Talks

TALKING PRICES on deciduous fruits east of the Rocky Mountains is still a hazardous occupation, as apple growers in the Appalachians have expensively learned. Yet peach growers, pear growers, and citrus growers on the West Coast visit freely and bargain as groups under the protective umbrella of the law. Here is a situation which, like the weather, is talked about considerably, yet about which little is done.

Of course, it is water over the dam to remind ourselves that representatives of the Eastern fruit industry and the processing industry deliberately worked to have themselves excluded from the legislation which they now find they need. They shied away from Marketing Agreements. As viewed in retrospect, this was the old story of cutting off one's nose to spite one's face. So here we are—still in need of something which will permit bargaining and price talks without landing in jail.

The sour cherry deal of 1955 is another example of how expensive this situation is becoming. The crop started at 7 cents a pound to growers. Those who profess to know say that the crop could have been moved nicely at that figure—neither too high nor too low. Many Southern Michigan cherries were bought at this price.

Then came a break in the price in western New York down to 5 cents, and the 7-cent price collapsed. The processors were willing and able to pay 7 cents, but the minority movement that broke the price controlled the situation as it always does.

Nobody is happy. Growers have lost 2 cents a pound in a year when they needed it. Processors who paid 7 cents have taken a beating. Those who bought at 5 cents are no better off in the long run.

And why did this happen? Largely because processors and growers cannot get together to work out a fair price.

It becomes all the more exasperating when a grower tries to buy some manufactured product. A radio or an electric shaver or a fountain pen will cost him a set price—"take it or leave it". But let this same grower offer cherries, and he gets what he can get—and "likes it".

America is a great country. America has some great leaders. Where are those in the fruit industry who have

the knowledge and the aptitudes and the courage to solve this problem? Frankly, it calls mostly for courage—let the chips fall where they may. But until that leadership gets this problem solved, growers are going to continue to be the tail in the game of crack the whip.

This Proves It!

WE were impressed by the recent statement in the *Michigan State University Quarterly Bulletin* that sod mulch is better than clean cultivation, inasmuch as it follows 25 years of patient experimenting.

The two methods were tested in a Bartlett pear orchard planted 25 years ago at the Graham Experiment Station, Grand Rapids. For the first 12 years the sod mulch cover retarded tree growth and fruit production. But from then on the trunks grew larger and the trees produced more fruit than those in clean cultivated plots.

At the end of the 25-year test the trees under the fertilized sod mulch had produced 1,136 more bushels of fruit, and 80 per cent more fruit over $2\frac{1}{2}$ inches in size.

In the sodded orchard water loss was practically eliminated, while soil in the clean cultivated orchard got worse every year. The compacted soil caused runoff and droughty subsoil, and fruit size suffered when rainfall was short.

They found the same things true for apple orchards. Cherries, too, did better under sod.

Fruit Growing is Such Fun!



Fruit Talk

Russian scientists have reported that the disintegration of humus by bacteria and the formation of carbon dioxide is an important aspect of increased crop production in which the carbon dioxide is picked up by the roots from the soil, transported to the leaves, and there used in photosynthesis fully as effectively as carbon dioxide from the air.

According to **Washington State College**, spray materials for an acre of apples in 1926 cost \$21.81 and spray labor cost \$14.75, compared to \$67.35 for materials and \$9.18 for labor in 1953.

New races of red stele in strawberries are now appearing which will make control by breeding a little more difficult.

Those engaged in food marketing receive \$1.70 an hour on the average for their services compared with \$1.29 for tobacco manufacturers and \$1.29 for retail apparel and accessory stores.

Forty-six per cent of the sweet cherries produced in the United States are sold fresh. By contrast only 9 per cent of sour cherries are sold fresh.

C. P. Norbury, prominent fruit grower near Malvern on the west side of England, has engineered a powerful concentrate orchard sprayer which uses $1\frac{1}{2}$ gallons of concentrate per acre, propelled by 18,000 cubic feet of air per minute.

"Feeble Minded Are Best Apple Growers" says the headline in a 40-year-old news clipping sent to us by a friend. Any startling dismay is dispelled by the text, which announces an award for an apple exhibit made by a school for feeble-minded youth. It is recorded further that "Individual exhibitors expressed disapproval, but officials of the show refused to exclude institutions and said it was too late to kick anyhow."

Following the fundamental work of **Dr. G. M. Darrow** of the USDA, Dutch strawberry growers are manipulating the flowering of strawberries by controlling the length of day of plants grown in cold frames and covered with shade. Plants which are given a 12-hour day in May produce a fall crop of strawberries.

Biale, Young, and Olmstead of the University of California at Los Angeles have concluded from a study of 14 species of tropical, subtropical, and temperate fruit that native ethylene which occurs in plants is a product of the ripening process rather than the cause of ripening.

A 38-page booklet from the State of Michigan entitled "Migrants in Michigan" is a thorough study of the migrant agricultural worker, from where he comes, where he works, what he does, recruiting and employment, housing facilities, school opportunities, health benefits, earnings, adult education, recreation, and community organization—worth a look by those who face this problem.

Dr. Fritz Kobel, well-known fruit scientist at Wandenspil, Switzerland, says that he can produce zinc deficiency symptoms in apple trees more easily by adding phosphorus than by withholding zinc.

—H.B.T.

Coming Next Month
75th Anniversary Issue

- Grandfather's Album of Fruit Progress
- Four-Generation Fruit Farm
- Pomology's Hall of Fame
- Fruit Varieties of Yesterday
- Development and Growth of State Horticultural Societies
- What the Future Holds

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